CONSTRUCTION NEWS

PERSONALS, ENGINEERING SOCIETIES, ENGINEERING SCHOOLS, READERS' WANTS, INDUSTRIAL NOTES, PUBLICATIONS.

Supplement to ENGINEERING NEWS. New York, December 29, 1904.

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PERSONAL.

Mr. E. H. Keating has been appointed Chief Consulting Engineer of the Toronto Street Ry. Co., of Toronto, Ont.

Mr. O. H. Stratton, of Albany, N. Y., has been appointed a bridge designer in the New York State Engineer's Office at Albany.

Mr. Samuel H. Lea, M. Am. Soc. C. E., has been appointed Civil Engineer and Superintendent of Construction at Fort Meade, S. Dak.

Mr. L. B. Allen, formerly Assistant Engineer of the Chesapeake & Ohio R. R., at Richmond, Va., has been promoted to the position of Division Engineer, with headquarters at Ashland, Ky.

Mr. W. H. Courtenay, M. Am. Soc C E, has been appointed Chief Engineer of the Louisville & Nashville R. R. Co., vice Mr. R. Montfort, M. Am. Soc. C. E., who has been assigned to other duties.

Mr. Wm. B. Crawford, of Oliver Springs, Tenn., has accepted the position of Superintendent of the Brushy Mountain Coal Mines, succeeding Mr. V. R. Evans, resigned. Mr. Crawford will be located at Petros, Tenn.

Mr. Harris J. Ryan, M. Am. Inst. Elec. E., Professor of Electrical Engineering at Cornell University, has accepted a position as head of the Electrical Engineering Department at Leland Stanford, Jr., University.

Mr. W. H. Workman, formerly Assistant to the President of the Edison Electric Co., of Los Angeles, Cal., has accepted the position of Assistant Manager of Seattle-Tacoma Power Co., and will have his headquarters in Seattle, Wash.

Mr. Freeland Howe, Jr., Chemist and Bacteriologist, of Norway, Me., has been engaged to start in operation and to run official tests of water purification plants which have recently been built for the cities of Gloucester, N. J., Sunbury, Pa., and Monessen, Pa.

Mr. Theron H. Cepperly, of Johnstown, N. Y., has accepted a position as constructing engineer at Mauch Chunk, Pa., and will be associated with Mr. H. O. Rockwell in the erection of a new power house, construction of 12 miles of railroad and reconstruction of about 120 miles of road.

Mr. Edward D. B. Brown has resigned as Architect of the Lehigh Valley Railroad Co. to accept the position of Contracting Engineer of the Fairbanks, Morse & Co., of Chicago, Ill. The work on the new repair shops of the Lehigh Valley Railroad Co. at Sayre, Pa., on which Mr. Brown has been engaged for the past 2½ years, are practically completed.

Mr. L. O. Cameron has been appointed General Sales Agent of the office in the South which the Pressed Steel Car Co. opened recently. Mr. Cameron, whose headquarters will be in Atlanta, Ga., will have charge of all matters pertaining to the sales department in connection with railroads and manufacturing concerns located in the Southern Territory.

Mr. C. W. Whitney has resigned his position as Pacific Coast Representative of the McGraw Publishing Co., New York, and has become identified with the Abner Doble Co., of San Francisco, Engineers and Manufacturers of tangential water wheels and needle regulating nozzles. Mr. Whitney will have charge of the Abner Doble Co.'s publicity department.

Mr. H. von Schon, M. Am. Soc. C. E., formerly of Sault Ste. Marie, Mich., has located in Detroit, Mich., with office at 603 Wayne County Savings Bank Bldg. Mr. von Schon was Chief Engineer of the hydro-electric power development at Sault Ste. Marie from 1897-1904 and will devote his future practice to water supply and water power projects in consulting capacity.

Mr. Campbell Scott has resigned his position as Secretary and General Manager of the C. & C. Electric Co., of New York. His resignation is to take effect Jan. 1, 1905. Mr. Scott has been connected with the C. & C. Electric Co. for some seven years, for the past five years having been Secretary and General Manager. It is rumored that Mr. Scott is going into business on his own account.

Mr. John Bogart, M. Am. Soc. C. E., on Dec. 21, had a narrow escape in a somewhat serious railway accident occurring near Orange, Va., on the Southern Railway. Mr. Bogart was returning from Chattanooga after a conference with officers of the Corps of Engineers, U. S. A., upon the development of power connected with the improvement of the Tennessee River. The express train was derailed, either by the breaking of a flange or the spreading of the rails, and while the locomotive and two mail cars did not leave the track, the baggage and express cars, two Pullman sleepers and a day coach were derailed and ran about 400 ft. on the ties and into the ditch. The center section of the sleeper in which Mr. Bogart was traveling caught fire and the flames spread so rapidly that the passengers were compelled to crawl through one of the windows to escape. The passengers left in their night clothes only. Mr. Bogart's hair and pajamas were singed and he found himself in four inches of snow in a stubble-field without shoes or hat and very little clothing.

OBITUARY.

Alexander Struthers, Jr., a civil engineer, residing formerly at Grand Junction, Colo., died at Bisbee, Ariz., Dec. 14.

Francis M. Ricker, a sanitary engineer, died at Salem, Mass., Dec. 27, aged 59 years. For 19 years he was employed in the construction department of the Eastern R. R. Co. Of late years he had been employed as a sanitary engineer.

John Dunfee, a well-known contractor of Syracuse, N. Y., died in that city Dec. 24. He had several large contracts on the $9,000,000 Erie Canal work in 1896-97, and had also done considerable contracting work in Boston, Philadelphia, and other places.

George C. Densmore, a civil engineer, of Brooklyn, N. Y., died at the J. Hood Wright Hospital in New York, Dec. 20, from injuries sustained by being struck by train in the Manhattan subway while inspecting the system for the railway company. He was 64 years old.

Sir Lothian Bell, one of the most famous metallurgist and ironmasters of Great Britain, died last week at the advanced age of 88 years. He was particularly prominent in connection with the great development of the Scotch blast furnace industry from 1850 to 1880, and made valuable contributions to the literature of iron metallurgy, in recognition of which he received the honor of knighthood. In 1876 he served on the International juries at the Centennial Exhibition, and was elected a member of the American Philosophical Society. He was a Past-President of the Iron and Steel Institute, and visited this country with the Institute in 1890, taking the excursion with the party to Pittsburg and Chicago and through the iron districts of the South. Only a few weeks ago, as noted on our editorial page in our issue of Nov. 17, he was elected President of the Institution of Mining Engineers of Great Britain.

ENGINEERING SOCIETIES.

COMING MEETINGS.

AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.
Dec. 27 to 31. Annual meeting at Philadelphia, Pa. Secy., L. O. Howard, Washington, D. C.

AMERICAN ECONOMIC ASSOCIATION.
Dec. 28 to 30, 1904. Annual meeting at Chicago, Ill. Secy., F. A. Fetter, Ithaca, N. Y.

AMERICAN FOREST CONGRESS.
Jan. 2 to 6, 1905. At Washington, D. C., under the auspices of the American Forestry Association.

WESTERN SOCIETY OF ENGINEERS.
Jan. 3, 1905. Annual meeting at Chicago, Ill. Secy., J. H. Warder, Monadnock Block, Chicago, Ill.

MICHIGAN ENGINEERING SOCIETY.
Jan. 11 to 13, 1905. Annual meeting at Lansing, Mich. Secy., F. Hodgman, Climax, Mich.

AMERICAN INSTITUTE OF ARCHITECTS.
Jan. 11 to 13, 1905. Annual meeting at Washington, D. C. Secy., Glenn Brown, Washington, D. C.

INDIANA ENGINEERING SOCIETY.
Jan. 12 to 14, 1905. Annual meeting at Indianapolis. Secy., C. C. Brown, Commercial Club Bldg., Indianapolis, Ind.

OHIO SOCIETY OF SURVEYORS AND CIVIL ENGINEERS.
Jan. 16 to 18, 1905. Annual meeting at Columbus, O., Secy., E. G. Bradbury, Columbus, O.

WOOD PRESERVERS' ASSOCIATION.
Jan. 16 to 19, 1905. First annual meeting at New Orleans, La. Secy., C. W. Berry, Laramie, Wyo.

ILLINOIS SOCIETY OF ENGINEERS AND SURVEYORS.
Jan. 18 to 20, 1905. Annual meeting at Chicago, Ill. Secy., E. E. R. Tratman, 1636 Monadnock Block, Chicago, Ill.

CANADIAN SOCIETY OF CIVIL ENGINEERS.
Jan. 24 to 26, 1905. Annual meeting at Montreal, P. Q. Secy., Prof. C. H. McLeod, 877 Dorchester St., Montreal, P. Q.

NATIONAL BRICK MANUFACTURERS' ASSOCIATION.
Jan. 30 to Feb. 11, 1905. Annual meeting at Birmingham, Ala.

ASSOCIATION OF ONTARIO LAND SURVEYORS.
Feb. 28, 1905. Annual meeting at Toronto, Ont. Secy., Killaly Gamble, Temple Bldg., Toronto.

RAILWAY SIGNAL ASSOCIATION.—The next meeting of the Railway Signal Association will be held at the Grand Union Hotel, New York, at 2 p. m., Tuesday, Jan. 10, 1905. Mr. Edward T. Reynolds will read a paper on "Storage Battery for Block Signals," and the discussion of the report of Committee No. 8 on "Standard Specifications for Mechanical Interlocking and Material for Construction Work" will be continued. Secy., H. S. Balliet.

NATIONAL GOOD ROADS ASSOCIATION.—This association will hold a convention at Jacksonville, Fla., on Jan. 19, 20 and 21, 1905, immediately preceding the automobile races to be run at Ormond Datona Beach, Jan. 23 to 28, inclusive. It is announced that the association has made arrangements with several of the large railway companies for operating Good Roads Special Trains in 1905. The first train will leave St. Louis over the Missouri, Kansas & Texas system, on its educational campaign, Jan. 9.

AMERICAN RAILWAY MASTER MECHANICS' ASSOCIATION AND MASTER CAR BUILDERS' ASSOCIATION.—The annual conventions of these two associations will be held at Manhattan Beach, L. I., New York City. The Master Mechanics will meet on Wednesday, Thursday and Friday, June 14, 15 and 16, and the Master Car Builders on Monday, Tuesday and Wednesday, June 19, 20 and 21, 1905. The headquarters will be at the Oriental Hotel, and the management of the Oriental and Manhattan Beach hotels has made special rates for members of the association, their families and guests.

The Brighton Beach Hotel, located a short distance to the west of the Manhattan and Oriental Hotels, and operated under a separate management, will also cooperate, and has named the same rates as the other two hotels. During the period the two conventions are in session the Oriental Hotel will be reserved for the exclusive use of the members of the two conventions and their guests, including the members of the Railway Supplymen's Association. While the Manhattan Hotel cannot be given exclusively to the convention, practically all of the rooms will be reserved, and one of the large dining rooms will also be set aside for the use of the associations. Applications for rooms should be made to the Manhattan Beach Hotel & Land Co., 192 Broadway, New York, N. Y.

AMERICAN MOSQUITO EXTERMINATION SOCIETY.—At its second annual conference in New York City, Dec. 15 and 16, the National Mosquito Extermination Society changed the first word of its name from "National" to "American." Officers were re-elected, as follows: Wm. J. Matheson, New York City, President; Walter C. Kerr, Vice-President; Henry Clay Weeks, Bayside, New York City, Secretary; Frederick C. Beach, New York City, Treasurer. The greater part of the proceedings were either popular in character or related to entomological questions. It was agreed that the mosquito is responsible for the spread of both malaria and yellow fever, and it was shown that the mosquito nuisance, and with it these two diseases named, can be eliminated by the practice of methods now well established and easily executed.

A brief paper on "What New York City Is Doing and Might Do Towards Mosquito Extermination" was presented by Dr. Bramley, in behalf of Dr. Thomas Darlington, Health Commissioner of New York City. During the subway construction on Manhattan Island the board of health supervised the elimination of breeding places for mosquitos in the form of pools of water both in the subway trench and at the surface of the ground. Breeding places in the public parks and on private grounds have also received proper attention and studies have been made for draining large areas of marshy land. Further work is projected for 1905.

Mr. C. C. Vermeule, Consulting Engineer of the New Jersey Geological Survey, read a paper on "The Relation of Mosquito Extermination to Engineering and Public Improvements." An abstract of this paper is given elsewhere in this issue.

WESTERN SOCIETY OF ENGINEERS.—At the meeting held at the society's rooms in Chicago on Dec. 21 two interesting papers were read on "The Intercepting Sewers of Chicago.' They dealt very briefly with the general location and purpose of the intercepting system, but described with considerable detail the methods of construction employed in building the sections from 39th St. to 63d St., which sections were built by the city on the day labor system. The papers were by Mr. W. A. Shaw and the late Mr. Gay Miltimore, who were engineers in charge of the construction of these particular sections. Mr. Shaw's paper dealt with the section from 39th to 51st

St., the diameter being from 6½ to 16 ft. A considerable portion was built along the lake shore, partly in shallow water, the trench being protected by sheeting. All laborers were obtained from the Civil Service Commission and Mr. Shaw stated that they did as much work as men working for contractors. It is considered to have been demonstrated that the city can do its own work cheaper and more advantageously by day labor than by contract, but on account of existing laws the city is prohibited from doing any further work of the kind by day labor. Mr. Miltimore's paper dealt with the section from 51st to 63d St., and in addition to describing in detail the equipment and methods of construction it described the various obstructions encountered.

At a meeting of the electrical section of the society on Dec. 16, Prof. Henry Crew, of Northwestern University, presented a paper on "The Modern Theory of the Arc and Spark," illustrated by lantern slides.

AMERICAN SOCIETY FOR TESTING MATERIALS.—The letter ballot vote for the adoption of various standard specifications and the increase of dues was recently canvassed. The interesting result is that all were adopted, the total vote being from 85 to 115 on the various questions, and the adverse vote insignificant. The society's dues now are $5 per year. The specifications which were adopted by the vote in question deal with: Cement, both natural and Portland; Cast-Iron Pipe and Special Castings; Foundry Pig Iron; Malleable Castings; Metal in Locomotive Cylinders.

The executive committee has authorized the creation of several additional committees, whereas the Committee on Standard Tests for Boilers has been discontinued. The revised list of technical committees of the society is made up of the following: (A) On Standard Specifications for Iron and Steel, (B) on Standard Specifications for Cast-Iron and Finished Castings, (C) on Standard Specifications for Cements, (D) on Standard Specifications for Paving and Building Brick, (E) on Preservative Coatings for Iron and Steel, (F) on Heat Treatment of Iron and Steel, (G) on the Magnetic Properties of Iron and Steel, (H) on Standard Tests for Road Materials, (I) on Reinforced Concrete, (J) on Standard Specifications for Foundry Coke, (K) on Standard Methods of Testing, (L) on Standard Specifications and Tests for Sewer Pipes, (M) on Standard Specifications for Staybolts, (N) on Standard Tests for Lubricants, (O) on Uniform Speed in Commercial Testing, (P) on Fireproofing Materials, (Q) on Standard Specifications for the Grading of Structural Timber.

ASSOCIATION OF AMERICAN PORTLAND CEMENT MANUFACTURERS.—The annual meeting of this association was held at the Hotel Astor, New York City, on Dec. 13 and 14. The association has a membership of fifty companies or mills, representing a capital of not less than $50,000,000. The output of these mills is over 90% of the total production of Portland cement in the United States. About 45 out of the 50 mills included in the membership were represented.

The first day's session was devoted to business of the association; reports were received from the various committees detailing the work of the association for the past year. The treasurer's report showed a prosperous financial condition. The most interesting reports were from the committees on "Uniform Specifications," "Steel Concrete" and "New Uses." The Committee on Uniform Specifications has been cooperating with committees of the American Society of Civil Engineers, American Society for Testing Materials, American Railway Engineering and Maintenance of Way Association, and the American Institute of Architects. The result of the reports of these committees is a report embodying a set of uniform specifications and methods of testing, which have been approved by the associations interested in the subject.

The committee on Concrete-Steel reported cooperation with committees representing the iron and steel industries, the American Society for Testing Materials, and the American Society of Civil Engineers. These committees are engaged in an effort to formulate standard methods of construction.

The constitution and by-laws were so revised as materially to increase the income of the association. With this increased fund it is the intention of the Executive Committee to extend and enlarge the usefulness of the association and encourage chemical research.

The second day's session was devoted entirely to the reading and discussion of the following papers: "Cement Testing," by Mr. W. Purves Taylor; "Irregular Method of Testing Cement," by Mr. H. A. Schafer; "Some Further Investigations in Regard to the Constitution of Portland Cement," by Mr. Clifford Richardson; "Reinforced Concrete," by Mr. Chas. S. Hill; "Cyclone System of Burning Powdered Coal," by Mr. E. H. Stroud; "Laboratory Work at St. Louis," by Mr. Richard L. Humphrey. The annual dinner was served Tuesday evening, Dec. 13, at the Hotel Astor.

WESTERN RAILWAY CLUB.—Up to the present time this association has held its meetings in the afternoon, but owing to the falling off in attendance and to the fact that a very large number of members (many of whom would benefit specially by the information gained) are unable to leave their duties during working hours, it was decided to take a vote (by letter ballot) on the proposal to hold evening meetings in future. This proposal was adopted by a vote of 404 to 69, and the first evening meeting was held on Dec. 20 at the Auditorium Hotel, Chicago. The attendance was large, and the change promises to effect an improvement both in the attendance and in the discussions.

The first paper was by Mr. Slason Thompson on "American and British Reports on Railway Accidents." So far as it related to the subject it was of considerable interest, but the author went out of his way to attack the block signal system in general and also to call in question the integrity of the Interstate Commerce Commission in regard to its reports on railway accidents. That part of the paper which was of value analyzed the causes of casualties, showing that train accidents are not alone responsible for the large number of persons killed and injured. It also described at some length the English system of investigating accidents by officers of the army engineers, specially detailed for the work. The author omitted to state, however, that the block signal system is compulsory in England and that practically all the railways of the country are operated under that system. In the discussion of this paper, Mr. F. A. Delano, General Manager of the Chicago, Burlington & Quincy Ry., pointed out that there is a regrettable misunderstanding of the accident statistics as issued by the Interstate Commerce Commission, these being very generally assumed to represent the casualties due to train accidents, whereas a very large proportion represent casualties due to trespassing, unlawfully riding on freight trains, and to carelessness in getting on or off trains in motion. He thought it very important that something should be done to put the matter in its true light and relieve the railways from unjust censure.

The second paper was by Mr. O. W. Young on "Cylinder Clearance and Valve Events," discussing the action of steam in the cylinder and illustrating this by a number of indicator diagrams. Mr. Young is the inventor of a new type of valve gear with rotary valves, and stated that a locomotive fitted with this type of gear and valves has been in regular service for a year. It is successfully hauling a train that similar locomotives having the ordinary gear and valves are unable to handle satisfactorily, and is showing good results in coal and water consumption. He stated, among other things, that a reduction in clearance space is sometimes claimed to be in the interest of economy, but that in fact the amount of clearance space is merely a matter of expediency. This statement brought out a lengthy discussion from Mr. Hubbell, who represents the Allfree valve-gear, the special object of which is to reduce the clearance space.

CONNECTICUT HEALTH OFFICIALS.—The second annual sanitary conference of the health officials of Connecticut was held at Hartford on Dec. 14 and 15. Prof. Wm. H. Brewer, President of the Connecticut State Board of Health, reviewed certain phases of the development of public sanitation. Particular stress was laid upon the halting progress of sanitation until the acceptance of the germ theory of disease. As an illustration of the inadequacy of cleanliness alone, important as that is, Professor Brewer cited figures showing that although the cleaning given Havana when the city came under the control of the United States more than cut the total number of deaths in half, there was little or no diminution in yellow fever until the mosquito was recognized as the agent that spread the disease. Radical measures to suppress mosquitos and to prevent their access to yellow fever patients soon eliminated the disease from Havana, and it has not since returned.

After the presentation of a paper on "British Sewage Works," by Mr. M. N. Baker, of the editorial staff of this journal, Mr. T. H. McKenzie, M. Am. Soc. C. E., of Southington, Conn., described a septic tank which he built recently at Manchester, Conn. The tank has a holding capacity of 55,000 U. S. gallons and is designed to retain the sewage for an average of 18 hours. No screens, grit chambers or filter beds have yet been built. The tank is of concrete, covered, and cost $3,000, not including land. It was put in service this year. Thus far only 40 houses are connected with the sewerage system. This is the first septic tank in Connecticut, aside from one about as large as a hogshead at the Lakeville School.

In a paper on city milk supply, Prof. W. H. Conn, of Wesleyan University, Middletown, Conn., remarked that we are cleaning dirt from our streets and allowing dairymen to shovel it into our mouths. Adulteration of milk is now fairly well looked after, but attention to bacterial infection is only beginning. It is well established that typhoid fever is frequently, and diphtheria and scarlet fever sometimes, conveyed by milk, while the general conclusion is that infants are in danger and adults in little danger of tubercular infection through milk. The most serious aspect of the milk supply is its agency in the spread of diarrhoea among infants and young children.

Unfortunately bacterial studies of milk cannot go beyond quantitative examinations as yet, and there is no general standard for the bacterial contents of milk. A standard, however, can be established for any given city, based on a knowledge of local conditions and for use in conjunction with the sanitary inspection of dairies. Rochester, N. Y., the speaker said, had accomplished more in the way of milk sanitation than any other city of which he had knowledge.

Prof. H. E. Smith, of Yale University, read a paper on "The Use of Copper Salts in the Purification of Public Water Supply." In general, he endorsed the practice as employed for preventing tastes and odors due to organic growths in reservoirs, but he urged that the possibilities of this remedial agent should not be made an excuse for the improper construction of reservoirs.

As to the effect of copper treatment on typhoid germs, Professor Smith said that laboratory experiments seemed to indicate that the germs would be destroyed in three to five hours by using 1 part of the agent per 1[illegible] parts of water. A few experiments on a large scale have been made but the results are not yet available. Professor Smith did not think any one would favor the continuous treatment of water with so large amounts of copper as would be required to kill typhoid or cholera germs, but it might be used where a reservoir had been contaminated by flood water or in other cases where the re[illegible] question could be cut out of the water supply system for a time.

Only one reservoir in Connecticut has been treated with copper sulphate. In that case blue green algae had clogged mechanical filters and given rise to complaints of tastes and odors. After treatment the specific organisms causing the trouble disappeared, but infusorial growths, affected only by large amounts of copper, occurred.

From all the available data the speaker concluded that the quantities of copper sulphate required to kill water of algae growths would not be harmful to man, even if the copper remained in solution. There are indications that the copper is absorbed by the organic growths in the water.

In a paper on "Mosquitos and Their Relation to Public Health" Prof. W. E. Britton, State Entomologist of Connecticut, reviewed the general subject at some length. A mosquito survey of Connecticut was begun last spring. It is believed that a very small part of the 35 square miles of marsh land in the state affords breeding places for mosquitos, since most of it is well drained.

Mr. F. L. Ford, Assoc. M. Am. Soc. C. E., City Engineer of Hartford, read a paper on "The Sewerage Problems of Connecticut." Assuming the position that "the dumping of the sewage of any town into a stream is not a solution of that town's sewerage problem, but merely an intermediate stage in its development," Mr. Ford stated that so far as he could remember only 9 of the 168 towns in the state are yet provided with a "complete sewerage system." Those are the ones having works for treating the sewage, as follows: Bristol, Danbury, Granby, Litchfield, Meriden, Norfolk, Ridgefield, Simsbury and South Manchester. These nine towns have a combined population of about 73,000, which is less than 10% of the whole population of the state. The coast cities and towns will yet be obliged to construct outfall sewers to deep water, or tidal reservoirs, or, what is probable, some system of partial purification. As a rule the inland cities, most of which have combined sewers, will probably have to build filtration works. Many country residences and isolated settlements will be compelled to treat their sewage. In Hartford two trunk sewers, 2.69 miles long and costing $55,000, have just been built to serve 76 houses near a main trolley line. Numerous small, detached settlements of this character demand "compact, inexpensive and efficient little filtration systems."

In conclusion, Mr. Ford suggested that the state of Connecticut ought to take an active part in solving sewage disposal problems. Four lines for such action were proposed: (1) That the Legislature of 1905 increase the powers and duties of the State Board of Health, placing it "on a basis similar to that of the Massachusetts State Board of Health." (2) That during the next two years a survey of the potable waters of the state should be made, defining the catchment areas likely to be needed for public water supplies within the next 50 years. (3) That the Legislature of 1907 take action for the protection of the catchment areas just named. (4) That a law be passed requiring united action on the part of all towns and cities in each natural drainage basin towards the solution of the sewage disposal problem of each of those basins. Mr. Ford's recommendations were favorably received by the conference and a legislative committee of the State Board of Health was requested to urge the incoming Legislature to put them into effect.

CONSTRUCTION NEWS.

PLANS AND SPECIFICATIONS ON FILE.

The following Plans (P.), Specifications (S.), and Bidding Sheets (B. S.), may be seen at the office of The Engineering News Publishing Co., 220 Broadway, New York:

Bids close Dec.	Work.	Place.	On file.	See issue.
*30	Dredging	Norfolk, Va.	S.	12-15
*31	Office building	Montrose, Colo.	P. & S.	12- 8
31	Traveling crane	Wash., D. C.	S.	12- 1
Jan. 5	Water-works	Washington, Ga.	S.	12-15

*Work advertised in Engineering News.

NOTE.—We are desirous of securing specifications and bidding sheets (and plans when not too bulky) of pending work for file in our New York office for the benefit of contractors or others who may be interested in the work. If more sets than one are sent us we shall be pleased to distribute these to contractors who ask for them. When the work is advertised in Engineering News a note that the plans are filed with us will be added to the advertisement without cost.

LIST OF CONTRACTS PENDING.

Bids close.	Work.	Place.	See issue.
	LIGHT, HEAT AND POWER PLANTS.		
Dec. 30.	Lighting, New York, N. Y.		Dec. 22
Dec. 30.	Lighting, Cleveland, O.		Dec. 22
Dec. 31.	Electric system, Renovo, Pa.		Dec. 22
Dec. 31.	Electric lighting, Renovo, Pa.		Dec. 22
Dec. 31.	City lighting, Hanover, Pa.		Dec. 22

Jan. 3. Electric light plant, Bay City, Mich....Dec. 22
Jan. 16. Gas franchise, Fullerton, Cal.....Dec. 22
Jan. 24. Gas franchise, Oceanside, Cal.....Dec. 22
Feb. 15. Generators, Chicago, Ill.....Dec. 22

BRIDGES.

Dec. 29. Bridge steel, Latrobe, Pa.....Dec. 1
Dec. 30. Bridges, Princeton, Ind.....Dec. 15
Dec. 31. Bridges, steel, Jamaica, Ill.....Dec. 29
Dec. 31. Bridges, steel, Jasper, Ala.....Dec. 29
Dec. 31. Bridge, steel, Houma, La.....Dec. 8
Jan. 1. Bridge, steel, Tombstone, Ariz.....Dec. 1
Jan. 2. Bridge, wood, Meridian, Miss.....Dec. 22
Jan. 2. Bridge, steel, Vicksburg, Miss.....Dec. 29
Jan. 3. Bridges, Carrollton, Mo.....Dec. 29
Jan. 3. Bridge, St. Paul, Minn.....Dec. 29
Jan. 3. Bridge, steel, Smithfield, N. C.....Dec. 22
Jan. 4. Bridges, Creston, Ia.....Dec. 22
Jan. 4. Bridges, Vermillion, S. Dak.....Dec. 22
Jan. 4. Bridge, steel, Cleveland, O.....Dec. 22
Jan. 5. Bridge, Redding, Cal.....Dec. 1
Jan. 5. Bridges, Phoenix, Ariz.....Dec. 1
Jan. 6. Bridge, steel, Castlewood, S. Dak.....Dec. 15
Jan. 6. Bridge, steel, Dayton, O.....Dec. 15
Advertised, Eng. News, Dec. 15 and 22.
Jan. 9. Bridge, Topeka, Kan.....Dec. 22
Jan. 9. Bridges, steel, Belair, Md.....Dec. 29
Jan. 10. Bridge, Harrisburg, Pa.....Dec. 29
Jan. 10. Bridges, Wayne, Neb.....Dec. 22
Jan. 11. Bridge, Springfield, Mass.....Dec. 22
Advertised, Eng. News, Dec. 22 and 29.
Jan. 11. Bridge, steel, Billings, Mont.....Dec. 1
Advertised, Eng. News, Dec. 1 to 29.
Jan. 13. Bridge, Lewiston, Idaho.....Dec. 8
Jan. 14. Bridge, superstructure, Oshkosh, Wis..Dec. 29
Feb. 14. Bridges, stone, Napa, Cal.....Dec. 29

BUILDINGS.

Dec. 29. Greenhouse, New York, N. Y.....Dec. 22
Dec. 29. Post office, Vincennes, Ind.....Nov. 24
Dec. 29. Hotel, Victoria, B. C.....Nov. 3
Dec. 30. Heating, Leadville, Colo.....Dec. 8
Advertised, Eng. News, Dec. 8 and 15.
Dec. 31. Frame building, Montrose, Colo.....Dec. 1
Advertised, Eng. News, Dec. 1 to 22.
Dec. 31. Business block, Lincoln, Neb.....Dec. 22
Jan. 1. Business building, Morgantown, W. Va...Dec. 22
Jan. 2. Jail, Jonesville, Va.....Dec. 29
Jan. 3. Heating, etc., New York, N. Y.....Dec. 22
Jan. 3. Court house, Duluth, Minn.....Dec. 22
Jan. 3. Court house, Wheeling, W. Va.....Nov. 24
Jan. 3. Post office work, Kansas City, Kan.....Dec. 8
Jan. 4. Post office, Dekalb, Ill.....Dec. 8
Jan. 4. Dwelling, Baltimore, Md.....Dec. 8
Advertised, Eng. News, Dec. 8.
Jan. 4. Plumbing, Ellis Island, N. Y.....Dec. 22
Jan. 4. Wiring, Rochester, N. Y.....Dec. 29
Jan. 5. Structural work, Des Moines, Ia.....Dec. 22
Jan. 5. Jail plans, New Albany, Miss.....Dec. 22
Jan. 5. Post office, Ogden, Utah.....Dec. 8
Jan. 6. Hospital, Lawrence, Kan.....Dec. 15
Jan. 5. Steel beams, etc., Washington, D. C.....Dec. 15
Advertised, Eng. News, Dec. 15 and 22.
Jan. 6. Painting post office, Springfield, Ill.....Dec. 15
Advertised, Eng. News, Dec. 15 and 22.
Jan. 7. Elevator, etc., Jacksonville, Fla.....Dec. 22
Jan. 9. State buildings, Columbus, O.....Dec. 22
Jan. 9. Post office, Henderson, Ky.....Dec. 8
Jan. 10. Post office, Newcastle, Pa.....Dec. 1
Advertised, Eng. News, Dec. 1 and 8.
Jan. 10. Office building, Wheeling, W. Va.....Dec. 29
Jan. 14. School, Rockland, Mich.....Dec. 29
Jan. 16. Hospital, Savannah, Ga.....Dec. 29
Jan. 18. Heating apparatus, Yankton, S. Dak...Dec. 22
Advertised, Eng. News, Dec. 22 and 29.
Jan. 19. Post office, Fresno, Cal.....Dec. 8
Jan. 19. Fifteen buildings, Ft. Des Moines, Ia...Dec. 29
Jan. 20. Officers' quarters, New York, N. Y.....Dec. 29
Jan. 20. Building, Ft. Logan Roots, Ark.....Dec. 29
Jan. 25. Post office, Washington, Pa.....Dec. 8
Jan. 28. Light fixtures, Cheyenne, Wyo.....Dec. 29
Advertised, Eng. News, Dec. 29 to Jan. 19.
Jan. 31. Post office, Albert Lea, Minn.....Dec. 8
Advertised, Eng. News, Dec. 8 and 15.
Feb. 1. Court house additions, Goshen, Ind.....Dec. 29
Feb. 7. Post office, Nevada, Mo.....Dec. 29
Advertised, Eng. News, Dec. 29 and Jan. 5.

WATER SUPPLY AND IRRIGATION.

Dec. 30. Water pipe, Crandon, Wis.....Dec. 15
Dec. 31. Water pipe, meters, etc., Baltimore, Md..Dec. 22
Dec. 31. Water mains, Falmouth, Ky.....Dec. 22
Jan. 2. Water-works, Owensboro, Ky.....Dec. 15
Jan. 2. Water-works valves, Winnipeg, Man.....Dec. 29
Jan. 3. Water meters, Pittsburg, Pa.....Dec. 29
Jan. 3. Pumping engine, etc., Muscatine, Ia...Dec. 8
Advertised, Eng. News, Dec. 8 to Jan. 4.
Jan. 5. Water supply improvement, Wash., Ga..Dec. 15
Advertised, Eng. News, Dec. 15 and 22.
Jan. 6. Water mains, New York, N. Y.....Dec. 29
Jan. 9. Water and sewer plans, Hastings, Minn.Dec. 29
Jan. 9. Outlet tunnel, Casper, Wyo.....Nov. 24
Advertised, Eng. News, Nov. 24 to Jan. 5.
Jan. 10. Pipe, etc., Washington, D. C.....Dec. 1
Jan. 12. Water-works, Newcastle, Neb.....Dec. 29
Jan. 14. Pumping engine, Kansas City, Mo.....Dec. 15
Advertised, Eng. News, Dec. 15 and 22.
Jan. 14. Water pipe, Savannah, Ga.....Dec. 8
Jan. 14. Water pipe laying, Sandusky, O.....Dec. 8
Jan. 16. Water pipe, North Bay, Ont.....Dec. 8
Jan. 25. Water-works, Deadwood, S. Dak.....Dec. 15
Advertised, Eng. News, Dec. 15.
Feb. 10. Water system, Bishop, Cal.....Dec. 15
Advertised, Eng. News, Dec. 8 to 29.

SEWERAGE.

Dec. 30. Sewer, Brooklyn, N. Y. Dec. 22
Dec. 30. Sewer, Omaha, Neb.....Dec. 22
Dec. 31. Pipe sewers, North Braddock, Pa.....Dec. 15
Dec. 31. Drainage, Hartford, Conn.....Dec. 29
Dec. 31. Sewer, Oklahoma, Okla.....Dec. 29
Jan. 2. Sewer system, New Albany, Ind.....Dec. 15
Jan. 3. Sewer extension, Morris, Minn.....Dec. 15
Jan. 3. Sewers, Springfield, Mo.....Dec. 22
Jan. 3. Sewers, Marion, Ind.....Dec. 22
Jan. 3. Sewer, Albany, N. Y.....Dec. 29
Jan. 4. Sewer system, Jefferson City, Mo.....Dec. 22
Jan. 4. Sewers, Mamoroneck, N. Y.....Dec. 15
Advertised, Eng. News, Dec. 15 to 29.
Jan. 9. Sewer, Lebanon, Ind.....Dec. 29
Jan. 15. Sewerage, Louisburg, N. C.....Dec. 29
Advertised, Eng. News, Dec. 29 and Jan. 5.
Jan. 15. Sewers and water-works, Louisburg, N. C.Dec. 29
Advertised, Eng. News, Dec. 29 and Jan. 5.
Jan. 16. Sewer system, Amarillo, Tex.....Dec. 22
Jan. 19. Sewer system, Iola, Kan.....Dec. 29
Jan. 31. Sewers, water pipe, etc., New Orleans, La.Nov. 24
Advertised, Eng. News, Nov. 24 to Jan. 19.
Feb. 1. Sewers, Cresco, Ia.....Dec. 29
Feb. 10. Sewer system, Bishop, Cal.....Dec. 15
Advertised, Eng. News, Dec. 8 to 22.

STREETS AND ROADS.

Dec. 29. Roads, Winamac, Ind.....Dec. 1
Dec. 29. Paving, asphalt, New York, N. Y.....Dec. 22
Jan. 2. Sidewalks, Montgomery, Ala.....Dec. 22
Jan. 2. Paving, Cortland, N. Y.....Dec. 29
Jan. 3. Paving, etc., Albany, N. Y.....Dec. 29
Jan. 3. Paving, Toledo, O.....Dec. 29
Jan. 3. Road, Waterbury, Conn.....Dec. 22
Jan. 4. Road, Bakersfield, Cal.....Dec. 29
Jan. 5. Paving, Santa Barbara, Cal.....Dec. 29
Jan. 7. Road, gravel, Lebanon, Ind.....Dec. 22
Jan. 7. Macadamizing, Norwood, O.....Dec. 22
Jan. 11. Paving, Glenville, O.....Dec. 22
Jan. 13. Asphalt repair plant, Omaha, Neb.....Dec. 15
Jan. 16. Paving, Atlantic City, N. J.....Dec. 29
Jan. 16. Paving, Knox, Ind.....Dec. 29
Feb. 7. Roads, Rensselaer, Ind.....Dec. 29
Feb. 14. Road, Napa, Cal.....Dec. 29

MISCELLANEOUS CONTRACTS.

Dec. 29. Manila rope, New York, N. Y.....Dec. 22
Dec. 30. Rails, Norway.....Dec. 15
Dec. 30. Dredging, Norfolk, Va.....Dec. 8
Advertised, Eng. News, Dec. 8 and 15.
Dec. 30. Box lockers, Jeffersonville, Ind.....Dec. 8
Dec. 30. Drainage work, Bloomington, Ill.....Dec. 29
Dec. 31. Portland cement, Washington, D. C....Nov. 24
Dec. 31. Traveling crane, Washington, D. C.....Dec. 1
Dec. 31. Drains, Clinton, Ill.....Dec. 15
Jan. 1. Ditch, Fort Dodge, Ia.....Dec. 15
Jan. 4. Barges and boats, St. Louis, Mo.....Dec. 8
Advertised, Eng. News, Dec. 8 to Jan. 4.
Jan. 4. Mail conveying system, Chicago, Ill....Dec. 15
Advertised, Eng. News, Dec. 1 to 22.
Jan. 4. Ditches, Sidney, Ia.....Dec. 29
Advertised, Eng. News, Dec. 29.
Jan. 5. Garbage crematory, Ft. S. Houston, Tex.Dec. 8
Jan. 5. Fuel oil, etc., Phoenix, Ariz.....Nov. 24
Advertised, Eng. News, Nov. 24 to Jan. 4.
Jan. 6. Garbage cans, shovels, etc., Wash., D. C.Dec. 15
Jan. 6. Box lockers, San Francisco, Cal.....Dec. 22
Jan. 7. Elevator and lift, Washington, D. C.....Dec. 22
Jan. 7. Timber, Washington, D. C.....Dec. 15
Jan. 7. Drain, Sarina, Ont.....Dec. 8
Jan. 9. Dredging, Norfolk, Va.....Dec. 22
Advertised, Eng. News, Dec. 22 and Jan. 5.
Jan. 9. Laundry plant, Los Angeles, Cal.....Dec. 22
Jan. 9. Steel shed, Stockton, Cal.....Dec. 29
Jan. 10. Boiler, etc., Spring Lake, N. J.....Dec. 29
Advertised, Eng. News, Dec. 29 and Jan. 5.
Jan. 10. Motors, cement, shears, etc., Wash., D.C.Dec. 29
Jan. 10. Shells & sand, Nat'l Soldiers' Home, Va.Dec. 29
Jan. 10. Portland cement, Roswell, N. Mex.....Dec. 22
Advertised, Eng. News, Dec. 22 to Jan. 12.
Jan. 14. Dike, Mare Island, Cal.....Dec. 8
Jan. 14. Drainage work, Pana, Ill.....Dec. 29
Jan. 16. Dynamite, explosives, Wash., D. C.....Dec. 15
Advertised, Eng. News, Dec. 15 to Jan. 18.
Jan. 17. Machine tools, Washington, D. C.....Dec. 22
Jan. 17. Motors, wire, etc., Washington, D. C....Dec. 22
Jan. 20. Ry. const'n, Guthrie, Fairview & Western.Dec. 22
Jan. 24. Machinery, Washington, D. C.....Dec. 22
Jan. 24. Piles, Washington, D. C.....Dec. 22
Jan. 25. Cypress ties, Washington, D. C.....Dec. 29
Jan. 25. Dredging, New Orleans, La.....Dec. 8
Feb. 8. Dam and bridges, Phoenix, Ariz.....Dec. 1
Advertised, Eng. News, Dec. 1 to Feb. 5.
Feb. 15. Dredging, Chicago, Ill.....Dec. 15
Advertised, Eng. News, Dec. 15.
Mar. 31. Electric railway, China .....Oct. 20
Advertised, Eng. News, Oct. 20 to Dec. 29.
Apr. 1. Dredging, Sweden .....Nov. 24
May 1. Light house, Egypt .....Dec. 22

RAILWAYS.

ALEXANDRIA, BAYOU, MACON & GREENVILLE.—A preliminary survey is said to have been run from Alexandria, La., via Winnsboro, Delhi and Floyd, La., to Greenville, Miss. J. D. Garrison, Rayville, La., is Ch. Engr.

ATCHINSON, TOPEKA & SANTA FE.—A press report from Topeka, Kan., states that H. U. Mudge, Gen. Mgr., has announced that "it is practically certain that the Santa Fe stockholders will vote bonds at a special meeting in Topeka, Jan. 24, to the amount of $50,000,000. Part of this is to be used for improvements at Topeka, Kansas City, Chicago and Santa Fe division points. Much double track will be built, the Belen cut-off will be completed, many branch lines will be improved, and several new lines purchased."

A 25-mile branch line may be built from Wickenburg, Ariz., toward Caste Creek Hot Springs.

ATLANTA, KNOXVILLE & NORTHERN.—An Atlanta, Ga., newspaper report states that this company has applied for an amendment to its charter providing for a line from Cartersville, Ga., to Marietta. R. Montfort, Louisville, Ky., is Ch. Engr.

ATLANTA, KNOXVILLE & NORTHERN.—Grading is in progress on 87-mile new line from Etowah, Tenn., to Cartersville, Ga., where connection will be made with the Western Atlantic and Seaboard Air Line Rys. This work is being done by Wright, Williams & Wadley, contractors, of Birmingham, Ala., as noted Oct. 27. Tracklaying probably will begin in May or June of next year, and be completed before the end of 1905. The officers in charge of this work are: J. H. Ellis, Knoxville, Tenn., Gen. Mgr.; R. Montfort, Louisville, Ky., Ch. Engr.; John H. Peyton, Madisonville, Tenn., Engr. of construction.

BOISE TERMINAL RY.—An amendment to incorporation articles has been made authorizing extension of the line from Boise to More Creek, about 20 miles. This company is a branch of the Oregon Short Line, of which Wm. Ashton, Salt Lake City, Utah, is Ch. Engr.

CANADIAN NORTHERN.—Company has applied to Ontario government for two railway charters: One of these applications is for right to build a line from Byng Inlet, at the mouth of the French River, on Georgian Bay, to Montreal via Ottawa. The second is for the right to construct a railway from a point on the James Bay line north of Toronto to Montreal via Ottawa. At Montreal it will connect with the Intercolonial Ry. system. M. H. McLeod, Winnipeg, Man., is Ch. Engr.

CANADIAN PACIFIC.—The Ontario & Quebec Ry. Co., controlled by the C. P., will apply to Parliament for authority to build and operate a branch line from a point on its main line west of London to some point on the St. Clair River, between Sarnia and Lake St. Clair. Incorporation will be sought for the Georgian Bay and Seaboard Railway Co., with power to construct and operate a railway from a point on Georgian Bay between Port Severn and Penetanguishene, in a southerly direction through the Counties of Simtoe, Ontario, Victoria, Peterborough, Hastings, Lennox and Addington, Frontenac and Lanark, or any of them, to a point of connection with the Ontario and Quebec Railway between Cavanville and Moberly. A report states that the C. P. will apply to Parliament for authority to carry on the following construction work: For a railway from a point on the Deloraine extension of its Souris branch, to a point in township 1 or 2, and thence westerly for a distance of 100 miles; a railway from a point near Napinka to a junction with the northwest extension of the Souris branch; from a point on the Manitoba Southwestern Colonization Ry. between Manitou and Pilot Mound, thence in a general southerly direction to a point at or near the international boundary; from a point between Lauder, Man., and Monteith, thence easterly and northwesterly to a point between Glenboro and Treesbank on the Glenboro, Man., extension of the Souris branch; from a point at or near Osborne, on the Pembina Mountain branch, thence westerly and southwesterly to point on line of the Manitoba Southwestern Colonization Ry. between Cartwright, Man., and Boissevain; from a point near West Selkirk in a northerly direction, about 60 miles, to some point on the shore of Lake Winnipeg, thence in a direct line northwesterly to a point on the Little Saskatchewan River not more than six miles from Lake Winnipeg. W. F. Tye, Ch. Engr., at Montreal, Que.; F. F. Busteed, Asst. Ch. Engr., Winnipeg, Man.

CHATEAUGAY & LAKE PLACID.—New York State Railroad Commission has granted company right to increase capital stock from $450,000 to $2,450,000 for betterments. This road is operated by the Delaware & Hudson.

CHICAGO, INDIANAPOLIS & LOUISVILLE.—It is reported that a branch will be built from Indianapolis southwest via Patricksburg, Clay City and Coalmont to Linton, Ind., about 85 miles, with a branch to Victoria. W. A. Wallace, Chicago, is Division Engr. L. H. Parker, Lafayette, Ind., is Supt.

COLORADO.—The Colorado Construction Co., of Denver, has been incorporated to build a standard-gage railway to connect with beet sugar factories at Loveland, Longmont, Fort Collins, Greeley, Windsor and Eaton. Chester S. Morey and Charles Boettcher are interested. Surveyors are laying out route for the new line. It will connect with the Colorado & Southern and Union Pacific.

COLORADO, OKLAHOMA & SOUTHEASTERN.—It is reported that location surveys have been completed for this proposed road from Weatherford, Okla., through Independence, Putnam, Verona, Hackberry and Detroit, to Woodward, 85 miles. P. A. McCarthy, Lufkin, Tex., is Ch. Engr.

GREENVILLE & KNOXVILLE.—H. H. Prince, Pres., Greenville, S. C., is reported to have stated "that this company is building from Greenville to Riverview, S. C., 25 miles, and that 18 miles have been graded from Greenville north. The ultimate intention of the company is to build from Greenville to Knoxville, Tenn., 100 miles, and surveys for the entire line have been made." E. E. McCollough, Greenville, S. C., is Ch. Engr.; W. H. Patterson, Vice-Pres. and Treasurer, Greenville; D. C. Patterson, Secy., Atlanta, Ga.

NEW MEXICO.—The Comanche Mining & Milling Co., which is constructing a reduction works in Silver City, N. Mex., is said to plan the construction of a narrow-gage railroad to its gold mines at Pinos Altos, nine miles northeast of town. It is also contemplating the construction of a narrow-gage railroad to mining properties in the Burro Mountain district. It is stated that company will start work on these lines soon.

PENNSYLVANIA.—A Monongahela report mentions the following construction work planned in that district: The Johnetta Coal Co., a concern of the Pittsburg-Buffalo Co., is surveying a 10-mile coal field in the southern part of Washington County. The Pennsylvania Railroad Company is under contract to extend the Monongahela & Washington branch across the National pike into the field and is starting work. The Waynesburg & Greene Railroad and the Baltimore & Ohio Short Line also will be built into the heart of this coal field. Eight mines will be constructed in the spring.

BENNETTSVILLE & CHERAW.—The Secretary of State has authorized an amendment to the charter of the Bennettsville and Cheraw Railway Co. The company will now extend its line from Bennettsville, S. C., in a southerly direction to some point on the Carolina & Northern Railway.

SOMERSET RY.—Henry F. Hill, Ch. Engr., Oakland, Me., writes us that J. S. Kaulback & Co., of New York, have been awarded contract to build an extension nine miles long, from Austin Deadwater, Me., to the head of Moxie Pond. Work will begin at once. The contract calls for the completion of the line by Sept., 1905. The work includes 110 acres of clearing, 70,000 cu. yds. of earth excavation, 9,000 cu. yds. of loose rock, 12,000 cu. yds. of solid rock, 200,000 ft. of timber culverts and 800 ft. of pile bridges. 18 miles will be built this coming season, which, with the nine miles contracted for, will leave about 28 miles to be constructed in 1906, to reach Moosehead Lake. The line runs through a heavily timbered country. All bridge and culvert timbers can be obtained on the right-of-way. Bids on the above work were opened Dec. 1, and the award of the contract was mentioned under Street and Electric Railways in our issue of Dec. 8.

TRINITY & BRAZOS VALLEY.—The Trinity & Brazos Valley Railway Co. has made application to the Railroad Commission of Texas for authority to register bonds to the amount of $20,000 per mile on its completed line from Cleburne via Hillsboro to Mexia, about 78 miles. The issuance of these bonds was authorized by the Railroad Commission some months ago. It is stated that as soon as the bond proposition is settled the company will immediately put engineers in the field with view of locating an extension of the road from Cleburne north to Fort Worth, about 30 miles, and from Mexia southeast to Beaumont, about 200 miles, with perhaps a branch line from some point on the main line to Houston. R. H. Baker is Gen. Mgr., at Austin, Tex.; W. Malone, Cleburne, is Supt. of Construction.

YAZOO & MISSISSIPPI VALLEY.—A branch may be built from Redwood, Miss., to connect with the company's line from Yazoo City to Belzoni. Another report states that line will run from Yerger to Belzoni, via the Sunflower River, about 20 miles.

NEW INCORPORATIONS AND CHARTERS.

ATLANTA & GULF.—Ga.—This company has given notice that it will apply for a charter to build a line about 400 miles long from Atlanta southwest to the state line in Carroll County, and thence in the same direction to the Gulf of Mexico. Those interested are F. A. Kuhn, Kennon Dearing, R. B. Beedles, T. H. Goodwin, J. J. McClendon, Henderson Hallman, W. P. Powell, Hugh B.

Information concerning contracts to be let or supplies to be furnished, and corrections of errors and omissions in published items, are invited. Full details regarding the equipment, tools, etc., required for the proposed improvements are specially desired.

Cobbe, D. P. Fleishel and J. R. Bradbury, all of Atlanta. It is said that steam or electricity will be the motive power.

ALTON, JACKSONVILLE & PEORIA.—Ill.—Incorporated with $10,000 capital stock. Principal office is Jerseyville. Line is to be constructed from Alton, Ill., to Peoria, Ill., with branch lines from Alton to Grafton, Ill.; Jerseyville, Ill., to Hardin, Ill., and Jerseyville, Ill., to Carlinville, Ill. Incorporators and first board of directors, Robert Curdie, Alton, Ill.; Joseph W. Becker, Joseph M. Page, John C. McGrath, and A. O. Auten, of Jerseyville.

BROOKHAVEN & PEARL RIVER.—Miss.—S. J. Carpenter, Charles Rose, S. E. Morton, Joseph Jullies and D. J. Batchelder, Jr., have incorporated this company to build a railway from Brookhaven, Miss., to point on Pearl River.

BUFFALO UNION TERMINAL.—N. Y.—Incorporated to build a steam railroad seven miles long at Buffalo. Capital stock, $100,000. Directors: T. C. Mosedale, C. A. Collins and Bernard Mamon, of Buffalo. The road is to be built within the grounds of the Buffalo Union Furnace Co.

CALGARY, RED DEER AND BATTLEFORD.—Canada.—Company seeks incorporation rights from the Dominion Parliament for power to build a railroad from Calgary, Alberta Province, to Battleford, Saskatchewan Province. McGivern and Haydon, Ottawa, Ont., are reported to represent other promoters.

COLORADO, NEW MEXICO & GULF.—Colo.—Charter has been applied for to build a railroad from Durango, Colo., to New Mexico and Colorado state line, connecting at this point with the Durango, Albuquerque & Gulf Ry. Capitalized at $500,000. Francis J. Torrence and Arthur Kennedy, of Pittsburg, Pa.; T. Lee Clark, of Allegheny, Pa.; W. H. Andrews, of Albuquerque, N. Mex., and W. S. Hopkins, of Hillsbor, N. Mex., are the directors. Work is said to have already been begun on construction of the road. The entire project, including the building and equipping of both roads, will exceed $5,000,000, according to estimates.

EASTERN WASHINGTON.—Wash.—Company has been incorporated to build a railroad from Fletcher to Connell, Adams County, 35 miles. Capital stock, $200,000. Incorporators: Edward W. Swanson, Secy. and Gen. Mgr. of the Farmers' Grain & Supply Co. of Spokane, Wash., and Willard S. Foster, of Cheney, Wash. Surveys have been commenced and it is proposed to begin grading as soon as the route is located. Stock is almost subscribed.

GEORGIAN BAY & SEABOARD.—Canada.—The Georgian Bay & Seaboard Railway Co. is seeking incorporation to construct a railway from a point on Georgian Bay between Port Severn and Penetanguishene, Ont., in a southerly direction through the counties of Simcoe, Ontario, Victoria, Peterboro, Hastings, Lennox, Addington, and Frontenac, to connect with the Ontario & Quebec Ry. between Cavanville and Moberly.

KANSAS RAILROAD.—Kan.—Charter has been granted to build a railroad from a point on the Missouri and Kansas line, in Crawford County, through Crawford, Neosho, Wilson, Elk, Butler, Cowley, Sumner, Harper, Barber, Comanche and Clark counties, with branches in Greenwood, Chautauqua, Kingman, Sedgwick and Pratt counties. Capital stock, $2,000,000. Office is at Fredonia. The company is reported to be a revival of one of the old railroad corporations chartered in "boom" times. The directors are T. J. Hudson, H. B. Hardy, T. F. C. Dodd, James Kennedy and T. C. Babb, all of Fredonia.

LUFKIN, BATSON & BEAUMONT.—Tex.—A company has organized to build a line from Lufkin, south to the gulf coast through the counties of Angelina, Polk, Hardin, Liberty and Chambers. Edward Kennedy, of Beaumont, Tex., is the promoter. Noted previously.

OKLAHOMA CITY, HENRIETTA & ST. LOUIS.—Okla.—It is reported that this company has been incorporated to build a line from Woodward, Okla., via Oklahoma City to Checotah, Ind. T., about 280 miles. H. W. Clegren, John H. Dibble, J. H. Wheeler, J. W. Bryor and John W. Shartel, all of Oklahoma City, are directors

PLANT CITY, ARCADIA & GULF.—Fla.—Company has filed articles of incorporation. Company will purchase 12 miles of line built by the Warnell Lumber & Veneer Co., of Plant City, and extend it southeast through Hillsborough, Polk, Manatee and De Soto counties for about 65 miles. The incorporators are Charles A. Root, D. C. Thompson, William Schneider and Albert Schneider, all of Plant City, and who are, respectively, President, Vice-President, Treasurer and Secretary of the company. Peter O. Knight, of Tampa, Fla., is general attorney. Capital stock, $200,000.

SAN JOSE RY.—Nev.—Incorporated at Carson to build a railroad. Capital, $500,000. P. B. Ellis, G. W. Nesmith and Fred Knoblock, of Carson, are reported stockholders. George Toumey, of San Francisco, will be general agent and representative in California.

ST. LOUIS & NORTHEASTERN.—Ill.—Incorporation has been granted this company to build a railroad from Edwardsville southwest to East St. Louis, 18 miles. W. B. McKinley, B. R. Stephenson, H. J. Pepper and S. A. Power, of Champaign, Ill., are incorporators. Capital stock, $400,000.

SHAWNEETOWN & ROSICLARE.—Ill.—This company has been incorporated to build a railroad from Shawneetown, Gallatin County, Ill., to a point on the Ohio River near Rosiclare, about 32 miles. Capital stock, $1,000,000. Incorporators: W. H. Swift, St. Louis, Mo.; S. C. McWade and J. A. Ledbetter, Elizabethtown, Ill.; George Hanlon, William A. Peeples and William H. Glover, Shawneetown, Ill. Principal office, Shawneetown. It is reported that the Fruin-Bambrick Construction Co., of St. Louis, will finance the project.

WINKLE, HOUSTON & ST. LOUIS.—Ill.—Incorporated in Illinois to build a railroad from Winkle, Perry County, west to Houston, Randolph County, 20 miles. C. A. Lyle, H. C. Rutledge, A. J. Davis and others, of Winkle, Ill., are incorporators.

WISCONSIN.—A company will be organized at Racine by H. E. Miles, Pres. of Racine Sattley Co., to build a belt line or spur from Sattley factory, connecting with railways in this city.

WASHINGTON CENTRAL.—Wash.—Incorporated by Geo. E. Long, M. D. Sayles and L. E. Crouch, of Portland, Ore., with 8500,000 capital stock. Principal office at Centralia, Wash., where E. V. Bloomfield, Trustee, may be addressed. The object of the corporation is "To acquire, construct, equip, build and operate the following railways, telegraph and telephone lines: A railway, telegraph and telephone line from a point on Grays harbor, in or near the town of Grays Harbor City, Chehalis County, Wash., thence in a general easterly direction to the foot of Priest Rapids, Wash., running through the counties of Chehalis, Lewis, Thurston and Yakima. Also a branch line starting at a point on the above line five miles or thereabout east of Centralia, Wash., thence in a general southeasterly direction along Hanford and Packwood creeks for a distance of five miles or thereabouts, in Lewis County, Wash.

STREET AND ELECTRIC RAILWAYS.

BRIDGTON, ME.—A petition for a charter for a street railway from Sebago Lake landing to Bridgton House, 1½ miles, has been filed.

BENNINGTON, VT.—It is announced that work will be commenced this spring in building the extension of Hoosac Valley Street Railway from Williamstown, Mass., to Bennington, a distance of about 14 miles.

PROVIDENCE, R. I.—The Boston & Providence Street Ry. Co., the concern that proposes to build a trolley line from Needham to Providence, connecting with Union company in Providence and Boston Elevated at Boston, has petitioned the Selectmen in several Massachusetts towns through which the line is to be constructed, for franchises to maintain and operate the surface enterprise.

NORWALK, CONN.—A petition will be presented at January session of General Assembly asking that body to grant to Wm. Wardwell, of New Canaan, and others, a charter to construct and operate a street railway in Norwalk, New Canaan and Ridgefield.

WORCESTER, MASS.—A petition has been presented to Board of Aldermen by the Worcester & Providence Street Ry. Co. for a double-track location between the terminus of Worcester Consolidated Street Ry. Co. line at Quinsigamond and city limits.

MORAVIA, N. Y.—State Railroad Commission approved the application of Syracuse, Skaneateles & Moravia R. R. Co. for permission to issue a first mortgage for $1,500,000. The proceeds of the bonds are to be issued for building of road. Company has the right of way from Moravia to Syracuse. W. P. Parker, City, is Pres.; W. L. Welb is Ch. Engr.

GLENS FALLS, N. Y.—Village Trustees have granted to Hudson Valley Ry. Co. a franchise to build and operate a freight line through Canal St. in this village. D. A. Van Wirt, of Glens Falls, is Ch. Engr.

JAMAICA (L. I.), N. Y.—The South Shore Traction Co., which proposes to build a trolley road from Brookhaven west to Central Ave. at the city limit in Jamaica, has been capitalized for $2,000,000, and has under consideration a bond issue for $3,000,000. Geo. Fisher, of New York, is Pres. According to reports the road will be 51 miles in length, and the company has secured franchises from Brookhaven, Islip, Babylon, Oyster Bay, Patchogue and Amityville.

NEWARK, N. J.—Permission was granted to Public Service Corporation to connect its Clinton Ave. trolley line with Springfield Ave. line, in Irvington, by Road Committee of Board of Freeholders. D. F. Carver is Ch. Engr., 29 Exchange Place, Jersey City.

NEW CASTLE, PA.—Mayor John C. Jackson has signed bill granting franchise to Pennsylvania & Mahoning Valley Street Electric Ry. Co. to run its interurban cars from Youngstown, and those of the New Castle and Sharon electric line into the city.

WILKES BARRE, PA.—The Lackawanna, Wyoming Valley & Western Railroad Co. made a proposition to State Department to build 20 miles of double track from Wilkes Barre to West Pittston by way of Nanticoke. The road will be built on private right-of-way and will be equipped with a third-rail system. The company will eventually extend its line to Washington, D. C., by way of Sunbury and Harrisburg, in which cities large power houses will be built. The charter application was filed by S. R. Ketcham, of Philadelphia, secretary and treasurer of Transit Finance Committee, and ex-Senator B. K. Focht, of Lewisburg, one of the promoters of the road.

READING, PA.—Capitalists of Philadelphia have formed syndicate with a view to building a trolley line from Reading to Pottstown. A portion of right of way has been obtained. Samuel H. Ashbridge, ex-Mayor of Philadelphia, represents the syndicate.

DOYLESTOWN, PA.—Press reports state that J. K. Kennedy, of New York, is the representative of a syndicate composed of New York and Philadelphia capitalists who will build a line from Doylestown to New Hope. The surveys for this line have been completed, and construction work will be started in the early spring.

HAGERSTOWN, MD.—W. C. Hepperle, Supt. Hagerstown Ry. Co., has asked the Commissioners of Myersville for a franchise granting certain privileges in the town, including the laying of a switch and track across Ellerton road, so the company will be enabled to extend road to rear of Floork & Gaver bank building. The company will erect a depot and warehouse in Myersville.

GRAFTON, W. VA.—A charter has been issued to Grafton Construction Co., with capital stock of $25,000, to do a general contracting business. Incorporators: W. E. Harton, G. W. Powell, Thos. F. Jobe, T. E. Bradshaw and W. E. Hildebrand, all of Pittsburg. The company will build a street car line in Grafton at an early date, and a survey has been made for a bridge over Tygart's Valley River.

WHEELING, W. VA.—The Wheeling Traction Co. will build an extension to its line to Shadyside. B. E. Walker is Ch. Engr.

RALEIGH, N. C.—Board of Aldermen granted a franchise to Raleigh & Durham Power & Traction Co. to operate an electric line here, and build a line of 26 miles to Durham.

WINSTON-SALEM, N. C.—Winston Township will vote on the question of issuing $37,000 in bonds for proposed electric car line between this place and High Point. Address Mayor for information.

TUSCUMBIA, ALA.—Articles of incorporation have been filed by Sheffield R. R. Co. to build an interurban electric line ten miles long connecting Sheffield, Florence and Tuscumbia. Geo. Parsons, Henry Parsons and J. W. Worthington, all of Tuscumbia, are incorporators.

FORT ADAMS, MISS.—Capitalists are pushing to completion the project for construction of an electric railway line from Fort Adams through Woodville to a station on Yazoo & Mississippi Valley Railroad. The charter has been granted, and correspondence is now on with New York interests that have subscribed $250,000 provided a similar amount be raised in Wilkinson County.

LEBANON, IND.—The Lebanon-Thorntown Traction Co., with headquarters in Indianapolis, has filed articles of incorporation. The capital stock was placed at $150,000, and the directors are Howard M. Atkinson, Robert P. Woods, F. M. Reed, of Indianapolis; Americus [illegible], of Lebanon, and Richard E. Niven, of Thorntown. It was stated in the articles that the proposed line would connect Thorntown with Lebanon.

GALION, O.—It is reported that the Galion Southern Ry. Co. has formulated plans for building the road next year. It will connect Galion, Mansfield and Mount Vernon.

LANSING, MICH.—Articles of incorporation between the Ohio & Michigan Traction Co., a Michigan corporation, and the Toledo & Northwestern Ry. Co., both organized for the purpose of constructing electric railways, have been filed with Secretary of State. The consolidating companies have a capital stock of $1,500,000. John [illegible], of Monroe, was the principal stockholder in the Michigan company.

PARIS, ILL.—Local capitalists are interested in the construction of a proposed interurban line from this city to Hume. The line if constructed will ultimately extend to Champaign.

DES MOINES, IA.—Wm. S. Porter, of Eldora, states that the Des Moines & Eldora Electric Ry. Co. has concluded arrangements for financing the road and that the first section will be built next season from Ankeny to Nevada.

GLENDIVE, MONT.—A petition asking that a franchise be granted to Glendive & Lower Valley Rapid Transit Co. for construction of an electric railroad from Glendive to Buford, N. D., a distance of 80 miles, has been presented to County Commissioners. It was held over until the next meeting of the board. The company will be capitalized at 1,000,000. The following names were signed to the petition: E. S. Baer, J. R. Widmyer, and H. J. Haskell, of Glendive, and B. S. Adams and John O'Brien, of Newlon.

ABILENE, TEX.—City Council has granted Fred Cockrell, City, and associates a franchise to build and operate an electric street car line in all streets of the city. Work to begin within 90 days. The line will connect Simmons College, Lyele Lake, Fair Grounds and Epileptic Colony, and will require ten miles of track.

LA GRANGE, ORE.—City Council has favorably considered the granting of a franchise for a right of way into city limits of Eastern Oregon Development Co. for an electric railway. As the Union County Court and the towns of Union and Cove have granted a franchise, the company is now in possession of the right to connect all the principal points in the valley with an electric line, including the Hot Lake Sanatarium, Union to Cove, and from Cove to Summerville, Elgin, Island City and La Grande.

SAN LUIS OBISPO, CAL.—F. S. Granger, of Santa Cruz, proposes to build an electric railway to Avila Beach, a distance of ten miles.

LIGHT, HEAT AND POWER PLANTS.

BANGOR, ME.—Council has appointed a committee to secure such action by the state legislature as may be necessary to empower the city to generate and sell electric light, power, and heat to the residents of Bangor and vicinity. The city council has voted also to double the capacity of the municipal lighting plant at the waterworks at cost of $10,000; this will be done at once.

NORWICH, CONN.—R. L. Warner, New England manager of the Westinghouse Electric Co., is interested in plan to construct a large power plant in this section. He has secured rights along the Quinebaug and Shetucket Rivers. It has not been decided where the plant will be located. Charter may be granted by the next legislature, to which a petition will be sent, to sell power in this section of the state.

DANBURY, CONN.—A syndicate of capitalists will apply to the general assembly for a charter for the Danbury Power Co. It is desired to secure a franchise to establish great power dams on the Rocky River at New Milford and the Still River at Lanesville and Brookfield, and to develop electric power which will be distributed for traction, light and power purposes in Danbury, Bethel, Brookfield, Ridgefield and Redding.

BINGHAMTON, N. Y.—Bids will be received for heating and lighting new armory. Heating apparatus will cost about $4,800 and lighting equipment $1,600.

NEW YORK, N. Y.—The City Committee of the Citizens' Union has adopted resolutions favoring an extension of municipal control of public utilities, a municipal lighting plant, purchase of electrical conduits in Manhattan and Bronx boroughs; the building of pipe galleries in connection with extensions of existing subway route, and with future routes, and the granting of power by the legislature to the city to build and operate gas and electric lighting plants.

NEW MILFORD, PA.—The New Milford Light & Power Co. has been incorporated with a capital of $10,000. A. E. Snyder is one of the reported incorporators.

LOCKHAVEN, PA.—The Susquehanna Power Co. has plan in view to construct a water-power plant here. Plant would have a capacity of about 1,000 HP. J. Ricker may be addressed.

PHILADELPHIA, PA.—Bids are reported being received by D. H. Burnham & Co., 1307 Market St., for building a power house at 13th and Ludlow Sts., for John Wanamaker Co.

ALTOONA, PA.—The Providence Hydro-Electric Co. has been chartered to build a water-power electric plant. Company probably will build a dam at headwaters of Juniata River. Harvey Linton, City Engr., is interested.

MORGANTOWN, W. VA.—Prof. C. R. Jones has made preliminary plans for a municipal electric light plant, to cost about $31,000, according to report.

BENWOOD, W. VA.—The Ohio Valley Electric Co., of Benwood and McMechen, has been granted a charter to construct and operate electric light plant, etc. Incorporators are W. H. Snyder, Charles Schad, Robert Newton, Michael F. Deegan, of Benwood, and S. E. Dorsey, of McMechen. Capital, $50,000.

MURPHY, N. C.—A charter has been granted to The Murphy Electric Light & Power Co. to establish a light and power plant here. Capital stock is $6,000. A. J. Gentry is an incorporator.

CLINTON, S. C.—Charles C. Wilson, Engr., of Columbia, S. C., informs us that bids probably will be received about Feb. 15 for erecting a power and electric light plant and water-works. Total cost, $25,000. Plant will be operated by steam. Mentioned on Dec. 15.

DOUGLAS, GA.—City may construct an electric light plant and water-works; $20,000 in bonds were previously voted. C. E. Baker, the Mayor, may be addressed.

MONROE, LA.—City may undertake to erect a gas-lighting plant.

CLARKSVILLE, TENN.—The Clarksville Gas Co. will be reorganized and plant will be improved and extended. J. H. Fall, of Nashville, is Pres. and S. J. Lowe, Secy. J. F. Gracey, H. C. Merritt and Dr. N. L. Carney are interested.

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MERIDIAN, MISS.—C. H. Dabbs, E. Cahn, B. J. Carter, T. E. Rivers, H. L. McKee and associates have applied for franchise to establish plant for furnishing gas, electric lights and steam heat.

KNOXVILLE, TENN.—R. W. Austin is interested, with others, in proposed electric plant for the Knoxville Power Co., at headwaters of Little River. J. W. Blackwell and W. C. Crozier are engineers in charge of preliminary survey.

HARTFORD, KY.—J. W. Hale, of Fordsville, will build an electric light plant at Hartford. Citizens will install an ice plant.

CLEVELAND, O.—The Osborn Engineering Co. has made preliminary estimates on the cost of constructing a lighting plant for this city. Cost is placed at $100,000.

CLEVELAND, O.—Bids are asked by A. R. Callow, Sec. Board of Public Service, 105 City Hall, until noon, Jan. 30, for furnishing, lighting, extinguishing and keeping in repair, including the furnishing of electricity and all materials necessary therefor, 1,212 electric lamps, more or less, for a period of one year, 450-watt lamps. W. J. Springborn, Pres. Bd.

SIOUX CITY, IA.—Samuel McRoberts, assistant treasurer for Armour & Co., Pres. of the Sioux City Traction Co. and Edward Tilden, have been granted franchise to establish lighting, heating and power plants in Sioux City. Mr. McRoberts is said to be arranging to send expert engineers of Chicago and Kansas City to Sioux City to make plans of the city and prepare estimates of cost of installing the proposed plants. E. L. Kirk, Gen. Mgr. of Sioux City Traction Co., may be addressed at La Salle St., Chicago, office of the Armour Co.

ST. CLOUD, MINN.—The Public Service Co. has been incorporated with $300,000 capital stock by Edward E. Clark, Robert L. Gale and George W. Stewart, all of St. Cloud, to manufacture, sell and generate gas and electricity for light, heat and power purposes. St. Cloud is principal place of business. Edward E. Clark, R. L. Gale, A. E. Fritz, Cyril L. Campbell and Geo. W. Stewart are directors. E. E. Clark is Secretary and Treasurer.

KANSAS CITY, KAN.—Council has passed an ordinance granting a 20-year franchise to supply natural gas to the Wyandotte Gas Co., the holder of the present artificial gas franchise. At the request of the attorneys for Yoke, Brown & Stephens, action on the ordinance granting that company a franchise was postponed.

LIVINGSTON, MONT.—Sam Houser, former governor of Montana, and eastern capitalists are said to be backing plan to build a dam at first canyon of the Yellowstone, five miles south of this city. Dam would be 145 ft. high, 3,000 ft. long at its base and 4,000 ft. across at top. Estimated cost is $2,000,000. A franchise in this city has been applied for. George J. Hill, of Helena, and J. F. O'Connor, of Livingston, are interested.

JONESBORO, ARK.—J. F. Gautney contemplates building an electric plant to transmit electricity to a distance of ten miles for lighting, for railways and for other purposes. It is stated that detailed information regarding the practicabilities of long-distance transmission lines and other particulars are wanted. Engineers are invited to correspond.

LITTLE ROCK, ARK.—Retail Grocers' Ice Co. may install an electric light plant.

E. A. Kingsley, Supt. Public Works, will prepare plans and specifications for new brick boiler house for the city electric light plant, for which the Council has appropriated $10,000. The new building is to be erected on the east side of the present plant.

TEMPLE, TEX.—F. D. Lyon, of Houston, representing Texas Gas Co., has conferred with business men of this city regarding proposed gas plant. The Texas Gas Co., of Houston, was granted a franchise recently to operate a gas plant here. It will cost between $20,000 and $30,000.

CLEVELAND, OKLA.—Oklahoma City Chamber of Commerce has appointed a committee to inspect gas conditions at Cleveland. Pipe line may be constructed from gas wells here to Oklahoma City; 9,000,000 ft. a day is estimated capacity of the wells. It would cost $1,000,000 for necessary piping, etc.

ALBUQUERQUE, N. MEX.—Joseph C. Bonner, Pres. of Toledo, O., Stock Exchange, is interested in project to erect a large power plant on both banks of Pecos River near Pecos forest reserve. A. R. Gibson, Mayor of Santa Fe, and W. H. Greer, of Albuquerque, have been named by local paper in connection with the scheme. Electrical power will be transmitted to Albuquerque, Santa Fe and Las Vegas if plant is constructed.

REARDAN, WASH.—Council at its last session granted a 15-year franchise to J. M. McDowell, of Deer Park, for an electric light plant.

HUNTSVILLE, UTAH.—This town is arranging to construct an electric light and power system, using the waters of Ogden River to develop power for the purpose. Town has engaged W. M. Bostoph, C. E., of Ogden, Utah, as engineer to prepare preliminary plans. It is expected to build the plant during 1905.

BRIDGES.

WEST CHESTER, PA.—Chester County Commissioners, it is stated, are contemplating the construction of stone bridge on arches over flat on east side of Brandywine at Lenape, next year. It is probable that plans will be prepared this winter.

SUNBURY, PA.—The Northumberland County Commissioners have decided to rebuild river bridge between Packer's Island and Sunbury as soon as arrangements can be made and contracts let.

NEW HAVEN, CONN.—Press reports state that the New York, New Haven & Hartford Railroad Co. will have contracts to let for a large amount of steel bridges to be built in this state in the coming year. There will be a single-track bridge 113 ft. long, two spans, on Danbury branch and a 630-ft. steel viaduct at Fall River, Mass. A two-span single-track bridge will be built across Norwalk River at Norwalk, and a two-track bridge 70 ft. long at Stonington. The Danbury branch will have a new 50-ft. single-track bridge. The Northampton division will get two bridges, one 200 ft. and the other 125 ft. long at Collinsville. Besides this there are to be 11 bridges in New Haven. W. H. Moore, City, is Bridge Engr.

SYRACUSE, N. Y.—This city has appropriated $7,000 toward the construction of a bridge over Oswego Canal at East Willow St. Total cost, $14,000. The state is also interested in the construction of this bridge.

NEW YORK, N. Y.—The following bids were received by Geo. E. Best, Bridge Comr., for constructing anchorages of Manhattan bridge over East River; Brooklyn end: Williams Engineering & Contracting Co., 13 Park Row, (1) $1,237,000, (2) $1,237,000; Naughton & Co., 258 Broadway, (1) $1,282,900, (2) $1,282,900; R. H. Hood & Co., 220 Broadway, (1) $1,511,884, (2) $1,611,884; Ryan & Parker Construction Co., 13 Park Row, (1) $1,393,000; Cosmos Engineering Co., Brooklyn, (1) $1,212,554. Manhattan end: Williams Engineering Co., (1) $1,197,000, (2) $1,197,000; Naughton & Co., (1) $1,296,150, (2) $1,296,150; R. H. Hood & Co., (1) $1,587,460, (2) $1,687,460; John C. Rodgers, 1909 Amsterdam Ave., (1) $1,409,000; John J. Hopper, 215 West 125th St., (1) $1,396,140, (2) $1,396,140.

HARRISBURG, PA.—Nelson & Buchanan, of Chambersburg, were the lowest bidders for bridge over Nescopec Creek, in Luzerne County, at $10,844. Penn Bridge Co., of Philadelphia, were low, at $16,100, on bridge across Lackawaxen River at Scelyville.

HARISBURG, PA.—Bids are asked by J. M. Shumaker, Supt. Pub. Grounds and Bldgs., until Jan. 10 for rebuilding substructure and superstructure of highway bridge across Penn's Creek, in Union County.

ALUMROCK, PA.—It is stated that the Jeannette, West Newton & Monongahela Street Ry. Co. will erect a 600-ft. steel bridge over Sewickley Creek.

ALLENTOWN, PA.—It is reported that an iron bridge 24 ft. wide, 800 ft. long, with 12-ft. sidewalks will be constructed at Tilghman St., to cost about $72,000.

BELAIR, MD.—We are informed that bids received Dec. 19 by County Commissioners for constructing two steel concrete bridges and abutments were rejected. New bids will be received Jan. 9. B. F. Hanway, Pres.

WASHINGTON, D. C.—The House Committee on Interstate and Foreign Commerce favorably reported the bill authorizing Mississippi Central Railroad Co. to build a bridge across Pearl River in Mississippi. F. L. Peck, Hattiesburg, Miss., is President of railroad.

JASPER, ALA.—Bids are asked until Dec. 31 for constructing a steel bridge at forks of Mulberry and Sipsie Rivers. Address Judge J. W. Shepherd, of Jasper.

VICKSBURG, MISS.—Bids are asked by J. D. Loughlin, Chancery Clk., until Jan. 2 for building steel bridge over Stout's Bayou on Road No. 1.

ALEXANDRIA, LA.—The city has awarded the contract for constructing steel bridge across Bayou Rapids, to George E. King Bridge Co., of Dallas, Tex.

CINCINNATI, O.—Plans for the new Harrison Ave. viaduct over Mill Creek and railroad tracks were submitted to Board Public Service by Acting City Engineer Breen, and were referred to Council. Est. cost, $250,000.

DEFIANCE, O.—Huston-Cleveland Co., of Columbus, was the lowest bidder, at $1,600, for constructing superstructure of bridge over Miami & Erie canal. Schneider Bros. were lowest on substructure, their bid being $8 and $8.40 per cu. yd.

RICHMOND, IND.—A steel bridge, 115 ft. long, at East Germantown, near here, owned by the Pennsylvania Railroad was wrecked.

INDIANAPOLIS, IND.—The following bridge contracts were awarded by County Commissioners: Buck Creek, Perry Township, Moore-Mansfield Co., $4,371; Crooked Creek, Washington Township, American Construction Co., $2,900; White Lick, Wayne, Township, A. W. Moore & Co., $4,300; Far Creek, Perry Township, Moore-Mansfield Co., $1,844; Lawrence Township, John A. Ross, $2,300.

For bridge over Swarmbranch in Lawrence Township, the lowest bid was $3,900, which was considered too high and bids will be readvertised for. Cyrus J. Clark is County Audr.

JAMAICA, ILL.—Bids are asked by Drainage Commissioners of Jamaica Special Drainage District for constructing six small steel bridges. A. S. Baker, Chn.

CENTRALIA, ILL.—City has engaged Iowa Engineering Co., of Clinton, Ia., to make surveys and prepare plans for 500 ft. concrete subway under railroads with alternate plan for steel viaduct.

SPRING GREEN, WIS.—The pier on east end of railroad bridge across Wisconsin River here has been weakened. It is being temporarily repaired and later on a new pier if not a new bridge will have to be built.

RACINE, WIS.—$65,000 voted to pay for bascule bridge at Main St. will be inadequate, it now being estimated that bridge desired will cost over $100,000.

OSHKOSH, WIS.—Bids are asked by Board Public Works until Jan. 14 for furnishing and constructing superstructure of bridge across Fox River at Main St. and South Main St. Karl L. Lehmann, Consult. Engr., 910 Opera House Bldg., Chicago, Ill.

ST. PAUL, MINN.—Board of Aldermen have rejected all bids received for reflooring Third St. bridge and ordered the work readvertised. A. W. Van Hoffen, of Minneapolis, was lowest bidder, at $10,937.

ST. PAUL, MINN.—Local press reports state that bids will be received Jan. 3 for reconstruction of high bridge. Est. cost, $60,000. L. W. Rundlett, Cy. Engr.

MINNEAPOLIS, MINN.—It is reported that the Soo line will replace bridge in Northeast Minneapolis recently destroyed by fire, with a steel structure.

TOPEKA, KAN.—Plans and specifications for Melan approach to Kaw River bridge and for three of the five smaller bridges for which bonds were voted for at recent special election were submitted by James F. McCabe, Cy. Engr. The amount of estimates are as follows: Melan approach, $24,296; Shunganunga bridge on Chandler St., $2,460; Shunganunga bridge on Kansas Ave., $4,732; Van Buren St., $2,320.

CARROLLTON, MO.—Bids are asked until Jan. 3 for constructing two bridges. Silas Ballard, Bridge Comr.

DENVER, COLO.—Bids for reconstruction of a bridge across Cherry Creek on Lawrence St. were received by Board Public Works Dec. 16, as follows: Bracket Bridge Co., Cincinnati, O., $27,930; Missouri Valley Bridge & Iron Co., Leavenworth, Kan., $29,484; American Bridge Co., New York, $25,510; Minneapolis Steel & Machine Co., $25,890; Pueblo Bridge Co., $28,600; New Castle Bridge Co., Indianapolis, Ind., $26,500; John Gilligan Bridge Co., Omaha, Neb., $26,723; Kansas City Bridge Co., $27,900; C. J. Sheeley, Lincoln, Neb., $24,998; J. F. Griffith Bridge Co., Des Moines, Ia., $26,200; Canton Bridge Co., Kansas City, Mo., $29,900; M. J. Patterson Construction Co., Denver, $25,600.

PORTLAND, ORE.—Bridges on Grand Ave. and Williams Ave. are reported as being in dangerous condition and will probably be repaired in the near future. Address City Engineer.

NAPA, CAL.—Bids are asked by Board of Supervisors until Feb. 14 for construction of two stone bridges on Road District No. 11.

Information concerning contracts to be let or supplies to be furnished, and corrections of errors and omissions in published items, are invited. Full details regarding the equipment, tools, etc., required for the proposed improvements are specially desired.

FERNDALE, CAL.—City Trustees have decided to build a new bridge across Francis Creek at Francis St., the old one having been condemned.

BUILDINGS.

BOSTON, MASS.—Ring & Whitney, Archs., 101 Tremont St., have prepared plans for buildings at the Nantasket Beach amusement park for Geo. A. Dodge, 15 State St. It is reported that cost will be $200,000.

BOSTON, MASS.—It is announced that Andrew Carnegie has given to city of Boston $540,000 to be used in connection with the Benjamin Franklin fund for the establishment of an Institution for Industrial Training. Charles W. Duane, of Christ Church; James Bells, of First Congregational Church, and Alexander K. MacLellan, of the First United Presbyterian Church, comprise present Board of Managers, which also includes Patrick A. Collins, "so long as he is Mayor of Boston, and his successors in that office"; Richard Olney, William Endicott, Henry P. Bowditch, Henry S. Pritchett, Nathan Matthews, Jr., Charles T. Gallagher, James J. Storrow and Frank K. Foster.

FALL RIVER, MASS.—Sub-bids are asked by the Granite Construction Co., which has the contract for St. Ann's Hospital building, for the Sisters of Tours, France. Bids are asked until Feb. 1. The building is four stories, 182 × 198 ft., brick, concrete, granite, and marble, with iron and steel work, concrete flooring, slate and copper roofing gas and electric fixtures, bath tubs, etc., Rev. Fr. Charland, South Main St., may be addressed.

NEW BEDFORD, MASS.—Louis G. Destremps & Son, Archs., Bennet Block, Fall River, are reported to be preparing plans for Church of St. Antoine de Padoue. This building recently collapsed. It is estimated that it will cost $150,000 to reconstruct the church.

NEW HAVEN, CONN.—E. W. Maynard, 226 Tremont St., Boston, Mass., is architect for theatre, to be erected by S. Z. Poli.

Fred. R. Comstock, Arch., 107 Fulton St., New York, N. Y., has completed plans for a church for the First Presbyterian Society to be erected on Elm St. John Dalgleish is Chn. of Bldg. Com., and may be addressed at 19 Bishop St. Estimated cost, $50,000 to $60,000.

NEW YORK, N. Y.—Plans have been filed by Harry T. Howell, Arch., 149th St. and Third Ave., for two 5-story brick tenements, 50x88 ft., on Beekman Ave., north of Oak Terrace, for Henry F. Wolf Co., 558 East 144th St. Cost, $100,000.

By Bernstein & Bernstein, Archs., 72 Trinity Pl., for two 6-story brick flats, 39x87 ft., on 100th St., east of Fifth Ave., for B. Hamburger, 192 Bowery. Cost, $80,000.

NEW BRIGHTON, N. Y.—All bids received on Dec. 19 for general construction of School 33 by C. B. J. Snyder, Dept. Education, are reported rejected. Lowest bid was $24,965.

NEW YORK, N. Y.—Bids are asked by Traber Norman, Q. M., Governor's Island, until 11 a. m., Jan. 20, for constructing two double sets officers' quarters, one double set non-commissioned staff officers' quarters and one storehouse, all of brick, at Fort Wood, Bedloe's Island, N. Y.

Board of Estimate has adopted a resolution recommending the acquisition of the following sites in Brooklyn borough for public baths: Fourth Ave. and President St.; Nostrand Ave., opposite Stockton St., and Hamburg Ave., north of Willoughby Ave. $345,000 will be cost of the three bath-houses.

BROOKLYN, N. Y.—Bids will be received by Horenburger & Straub, Archs., 122 Bowery, for a hotel building to be erected at Lota St. and Ave. T, for L. Jannicenil, Coney Island. Cost, about $80,000.

BINGHAMTON, N. Y.—Bids will be received by Board of Supervisors for heating and lighting new state armory. Maj. C. H. Hitchcock may be addressed.

NEW YORK, N. Y.—The proposed terminal of New York Central Ry. Co. will cover 19 whole blocks, between 42d and 57th Sts. and between Madison and Lexington Aves., according to reported statement made by Ira A. Place, company's counsel. For station alone, $2,600,000 will be expended. Total cost will be about $15,000,000. Mr. Place may be addressed at Grand Central Station.

ALBANY, N. Y.—Albany Amusement Co. is said to be receiving bids for the erection of 16 buildings for the amusement enterprise "Dreamland," which will be erected, according to report, near this city. An electric light plant is to be erected. S. J. Lynch, of Buffalo, is Secy. of company.

ROME, N. Y.—The Masonic Temple Association has appointed John T. Wiggins, Albert H. Golley and A. S. White a committee to secure plans for new Masonic temple, to be erected on the site of the burned Washington Street Opera House. Plans will provide both for a theater and for a building without a theater. Mr. Wiggins is Chn. of Com.

NEW YORK, N. Y.—Plans have been filed by F. C. Browne, Arch., 143 West 125th St., for two 5-story brick flats, 50 × 87 ft., at 526-532 West 124th St., for P. Braender, 63 West 125th St. Cost, $100,000.

By G. F. Pelham, 503 Fifth Ave., for twelve 4-story brick flats, 40 × 87 ft., on 125th St., for L. Cohen, 104 West 115th St. Cost, $480,000.

ROCHESTER, N. Y.—Bids are asked by T. E. McGarr, Secy. State Comm. in Lunacy, until 3 p. m., Jan. 4, for electric wiring for barns, soap factory, carpenter shop, piggery, paint shop and hennery, also four 150-h.p. boilers at Rochester State Hospital. G. L. Heins, State Arch., Albany.

NEW YORK, N. Y.—William H. Douglas, Representative for New York City, has introduced a bill authorizing the President to appoint a committee of three, residents of New York, to select plans for a suitable post-office building to be erected at a cost not to exceed $4,000,000. The bill provides that the site shall front on a street on at least two sides. It is specified that the site must be situated between 14th and 42d Sts., and Fourth and Sixth Aves. The appropriation carried for the site is not to exceed $4,000,000. A site having been chosen, it is provided that the Secretary of the Treasury, the Postmaster at New York, and the President of the Chamber of Commerce of New York City, shall act as a committee to select final plans. This matter was brought up at last session of House of Representatives.

TRENTON, N. J.—W. W. Slack, Arch., is preparing plans for a $50,000 apartment house.

CHESTER, PA.—A $80,000 Y. M. C. A. building will be erected here. $42,000 has been subscribed.

PHILADELPHIA, PA.—The Merchants' Warehousing Co., controlled by the Pennsylvania Ry. Co., will increase its capital stock from $500,000 to $1,000,000 for the purpose of enlarging its "river front stores," on Delaware Ave., south of Chestnut St.

ALLEGHENY, PA.—Building committee will be appointed to receive plans for new buildings for the Western Theological Seminary. Estimated cost of proposed

work is $200,000. Rev. David Gregg, Pres. Monongahela House, Pittsburg, may be addressed.

ASPINWALL, PA.—Bids will be received by Rutan & Russell, First National Bank Bldg., Pittsburg, for an administration building and superintendent's residence, at Aspinwall. The buildings will cost $70,000 and $20,000, respectively. E. M. Bigelow is Dir. Department of Public Works.

ALLEGHENY, PA.—C. C. Badgeley, of Fairmont, W. Va., will prepare plans for the $100,000 Presbyterian Hospital, which is to be erected at Sherman and Montgomery Aves. Previously mentioned.

PHILADELPHIA, PA.—A syndicate will erect a 20-story office building on site of old Hotel Bellevue. G. C. Boldt, George Elkins, Thomas Wanamaker and Thomas Dolan are mentioned in connection with the enterprise.

BALTIMORE, MD.—The Center Market Improvement Commission, composed of Felix Agnus, Chn., Hoen Bldg., 302 East Lexington St.; Frank Furst, Fidelity Bldg.; Henry Clark, Pres. National Howard Bank, Howard and Fayette Sts.; Mayor Timanus, City Hall, and City Comptroller Heffner, City Hall, will commission local architects to submit competitive designs for market buildings to be located on Center Market Space. $435,000 has been appropriated for the work. Three sheds will be built, two one story high, for general market purposes, and one two stories high, for a fish market, 60 × 150 ft., 100 × 200 ft. and 100 × 200 ft., steel, brick and wood. The Commission will erect building for the Maryland Institute, 3 stories, 90 × 300 ft., brick, stone, steel and glass. Cost, about $200,000.

WASHINGTON, D. C.—Plans will be prepared for Government Hall of Records building. It will be erected on site at E, F, 18th and 19th Sts., N. W., which has been purchased. Building will be 116 ft. high, 275 × 88 ft., with rear extension 180 × 88 ft. James Knox Taylor, Supervising Arch., Treasury Dept., has prepared plans. An appropriation of $500,000 will be asked of Congress for preliminary construction work.

According to "Star" the following buildings are under construction, with proposed cost: New union station, $12,000,000; National Museum, $3,500,000; Representatives' office building, $3,500,000; filtration plant, $1,600,000; Agricultural Department, $1,500,000; Municipal building, $1,450,000; school for United States engineers, $1,010,000; Connecticut Ave. bridge, $1,000,000; navy yard buildings, $850,000; Capitol power station, $750,000; War College, $700,000; College of the Immaculate Conception, $300,000; Municipal Hospital, $250,000; miscellaneous government buildings, $250,000; Naval Hospital and Medical School, $200,000; Trinity College for Women, $160,000; Anacostia bridge, $150,000; Daughters of Revolution Hall, $100,000; new police court, $75,000; total, $29,345,000. Buildings decided upon: Extension of Agricultural Department, $3,000,000; Senate office building, $2,500,000; extension of Capitol, $2,500,000; hall of records, $2,400,000; central power station, $1,250,000; George Washington University, $1,250,000; Daughters of Revolution buildings (complete), $400,000; municipal tuberculosis hospital, $150,000; cathedral school for boys, $150,000; navy yard buildings (estimated for), $327,000; total, $13,927,000. Buildings proposed: memorial bridge, $5,000,000; Department of State and Justice, $3,500,000; Supreme Court house, $2,500,000; total, $11,000,000. Grand total, $54,272,000.

JAMESTOWN, VA.—Congressman H. L. Maynard will amend his bill now pending in Congress for the appropriation of $3,000,000 towards the Jamestown exposition. He will ask for $5,000,000, $1,000,000 of which is to be spent for a government building and exhibit.

JONESVILLE, VA.—Bids are asked until noon, Jan. 2, for constructing county jail. B. F. Smith Fireproof Construction Co., Pope Bldg., Washington, D. C., Arch.; A. M. Goins, Secy. Jail Com.

NORFOLK, VA.—Raleigh Realty Corporation has been chartered. Officers: John Kevan Peebles, Pres.; R. H. Wainwright, vice-Pres., and Charles McI. Tunstall, Secy. Company will erect ten dwellings at a cost of $50,000. John K. Peebles is preparing the plans.

WHEELING, W. VA.—Bids are asked until Jan. 10 by Giesey & Faris for 12-story building, 100x127 ft., of fireproof construction, for Henry Schmulbach, to be equipped with steam and hot-water heating plant, electric lights, three passenger and one freight elevator. Cost, $500,000. Mentioned previously.

RALEIGH, N. C.—Directors of Hospital for Insane will ask Legislature for $80,000 appropriation for building additional group of cottages.

GREENSBORO, N. C.—Hook & Sawyer, Archs., Charlotte, N. C., have prepared plans for two Carnegie libraries, one for this city and the other for the State Normal and Industrial College.

CHARLOTTE, N. C.—Application has been made for a charter for the Highlands Hotel Co., which has been organized by business men of this city. Modern hotel will be erected by the company. Capital, $200,000, all of which has been subscribed. An option has been secured on a suitable site at West Trade and Church St. Architects have been asked to submit plans. It is planned by the building committee to begin construction by April 1.

RALEIGH, N. C.—The Masonic Temple Committee has decided to begin work on the new temple to be erected here next spring. It will cost $125,000. John C. Drewery, Secy. of Com., may be addressed.

MADISON, GA.—County Commissioners have ordered an election to be held on Jan. 17 to vote on the question of issuing $40,000 of bonds for a court house.

SAVANNAH, GA.—Bids are asked until Jan. 16 by Joseph T. Davidson, Q. M., for plumbing and electric wiring and general construction of a hospital at Port Screven.

MONTGOMERY, ALA.—Representative A. A. Wiley has introduced a bill in the House providing for $100,000 appropriation for the establishment of a national tuberculosis sanitarium.

HATTIESBURG, MISS.—The Gulf & Ship Island Ry. Co. may erect a 5-story hotel and depot here. Thomas Sully, New Orleans, La., is Arch.; Willis W. Vail, Ch. Engr., Gulfport, Miss.

JACKSON, MISS.—Local fraternal societies, it is reported, are contemplating the erection of a general lodge building, to cost about $100,000.

KNOXVILLE, TENN.—Trustees of Lawson-McGhee Library have purchased site for new building at Prince St. and Commerce Ave. Col. Charles McGhee is interested in plan to rebuild the library.

LOUISVILLE, KY.—Fiscal Court may advertise for bids in January for building proposed $325,000 armory. Brinton B. Davis is Arch. James P. Gregory is County Judge.

LOUISVILLE, KY.—The Louisville & Nashville Ry. Co. will erect a 10-story steel fireproof building at Ninth St. and Broadway. It will be 60 × 200 ft. in size. Cost, $300,000 to $400,000. Jonas Werness is Ch. Arch. of Engineer's Dept.

TOLEDO, O.—A report states that Langdon & Hohly, Archs., Spitzer Bldg., has plans for remodeling Valentine theater building and for addition of two stories. New building is to be erected by Geo. H. Ketcham, Valentine Bldg. The plans will be ready for contractors soon. Estimated cost, $100,000.

"Blade" announces that plans have been prepared for new $1,000,000 Wabash Ry. Co. passenger station.

Bacon & Huber, Archs., Toledo, inform us that no additions to Boody Hotel are contemplated, as mentioned in local reports.

CLEVELAND, O.—Theodore Schmitt, of the firm of Lehmann & Schmitt, County Archs., has stated that complete working plans for both the civil and criminal court buildings probably would be finished by April, 1905. Estimated cost, $639,209.

TOLEDO, O.—City Council has passed an ordinance authorizing the issue of $100,000 of bonds for the erection of a market house. Charles H. Nauts is Cy. Clk.

GOSHEN, IND.—Bids are asked by Elkhart County Board of Commissioners until Feb. 1, noon, for building additions to court-house. Patton & Miller, Caicago, are Archs. Charles A. Davis is Chn.

INDIANAPOLIS, IND.—A. A. Young, custodian of new post office building, announces that bids will be invited for supplying $90,000 worth of furniture for the new building.

SOUTH BEND, IND.—S. S. Beman, 135 Adams St., Chicago, Ill., is architect for proposed $250,000 Y. M. C. A. building. It will be built next year.

TERRE HAUTE, IND.—In biennial report of the Indiana Normal School, now under consideration by the governor, an appropriation of $100,000 is asked, to be used in erecting a dormitory for women students. W. W. Parsons is Pres. State Normal School.

INDIANAPOLIS, IND.—Contracts for L. S. Ayers building has been let to West Lake Construction Co., of St. Louis, and to the Noelke-Richards Co., of Indianapolis. Cost, $300,000.

The Federal Building Co. will erect an office building at Meridian and Ohio Sts. Bids will be asked soon. A. F. Potts is Pres.

CARO, MICH.—Court-house to cost $100,000 may be erected.

ROCKLAND, MICH.—Bids are asked by Arthur James, Secy. Bd. Education, until 7:30 p. m., Jan. 14, for constructing a school building. Charlton & Kuenzli, Marquette, Mich., are Archs.

CHICAGO, ILL.—Hannah & Hogg are said to have purchased property at Madison and Clark Sts. with view of erecting an 18-story office building on the site. Leases of present buildings do not expire for three years.

CHICAGO, ILL.—Bids were received as follows, Dec. 16, by Commissioner of Public Works F. W. Blocki, 222 City Hall, for the removal of present superstructure and the erection of a new superstructure for the Lake View crib, about six miles from the mouth of the Chicago River, in Lake Michigan. New superstructure will be 72 ft. in diameter, and 40 ft. high. Contract is for general work, plumbing, steam heating, and steel and iron work. Fitz-Simons-Connell Co., $70,500; Jackson & Corbett, $78,876; John W. Larson, $89,300; Chicago and Great Lakes Dredge & Dock Co., $82,750; J. J. O'Heron, $69,100.

F. G. Schellentrager, Empire Bldg., is stated to be taking bids on a 6-story apartment house, at Penn and Muirland Aves. Estimated cost, $200,000.

CHICAGO, ILL.—J. F. & J. P. Doerr are architects for apartment building to be erected at 59th St. and Calumet Ave. for Dr. Trenchard. Three stories high, 121 × 68 ft. Cost will be about $100,000.

CHICAGO, ILL.—C. A. Eckstorm, Arch., 131 La Salle St., is reported to be receiving bids for office building, to be erected at 96-98 Washington St., for Chicago Title & Trust Co., 100 Washington St., mentioned last week. It will be five stories, 60x110 ft., built of brick and stone, composition roof, iron and steel work; cost, $50,000 to $60,000. Alternate bids will be taken on foundations to carry ten extra stories.

Nimmons & Fellows, Archs., 1733 Marquette Bldg., inform us that the mechanical equipment for Sears, Roebuck & Co.'s buildings, at Kedzie Ave. to Harvard St., will be designed and installed under supervision of Adams & Schwab, Engrs., Baltimore, Md. Particulars given in issue of Dec. 11.

Bids will be received by Jenney & Mundie, Archs., 171 La Salle St., for an automobile building, to be erected on Michigan boulevard, near 12th St., for J. M. Kesner. It will be three stories high, 50x180 ft., of brick and stone. Cost, $60,000.

Holabird & Roache, Archs., Monadnock Bldg., are making plans for addition to the Chicago Athletic Club building. As mentioned last week, it probably will be ten stories, brick and stone, built to correspond with present building in structure. Cost, $250,000. Bids will be received by architects about Feb. 1, 1905.

ROCK ISLAND, ILL.—An appropriation of $426,500 will be asked by the State Board of Charities for the Western Illinois Hospital for the Insane. The improvements recommended include $20,000 for a recreation building, $25,000 for a female dormitory, and $35,000 for a new infirmary.

Board of Supervisors Committee recommends that new jail be built or present one remodeled.

MILWAUKEE, WIS.—Archbishop S. G. Messmer will recommend the erection of a new library building to cost from $30,000 to $40,000 for St. Francis Seminary at the annual meeting or patronal feast of the seminary to be held Jan. 29.

LA CROSSE, WIS.—James Gamble Rogers, of Chicago; Joseph C. Llewellyn, of Chicago; Patton & Miller, of Chicago; Ferry & Clas, of Milwaukee, and Schick & Roth, of this city, are now at work on plans for high school, and by Feb. 15, it is said, the plans will have been adopted. W. B. Ittner, of St. Louis, will pass upon plans.

WATERLOO, IA.—It is reported that the Althouse Estate proposes erecting a 4-story business building. Estimated cost, $125,000.

FORT DES MOINES, IA.—Bids are asked by L. Hardeman, Q.-M., until 2 p. m., Jan. 19, for constructing, plumbing, steam heating, and electric wiring the following buildings: One field officers' quarters, two double sets captains' quarters, two double sets lieutenants' quarters, one double set quarters for civilian employees, two double cavalry barracks, two double stable guard and shop buildings, four cavalry stables, one wagon shed and addition to quartermaster's storehouse.

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MINNEAPOLIS, MINN.—The State Legislature will be asked to appropriate $425,000 for a new main building at University of Minnesota. J. C. Wyman has been elected president of Board of Regents.

MINNEAPOLIS, MINN.—University Board of Regents will petition Legislature for $250,000 appropriation for erection of new Main building on campus. J. T. Wyman is Acting-Pres. of Bd.

MINNEAPOLIS, MINN.—James Knox Taylor, Supervising Arch., Treasury Dept., has recommended to Congress the erection of a new public building at Minneapolis, to cost $2,500,000; the site to cost $700,000 and the building $1,800,000.

DULUTH, MINN.—Legislature will pass upon plan to appropriate $40,000 for new dormitory building for Duluth Normal School. Bert Fesler, Cy. Attorney, may be addressed.

HUTCHINSON, KAN.—E. E. Marshall, Supt. Hutchinson Reformatory, in report to Governor Bailey recommends that $70,000 be appropriated for new cell block and $20,000 for building wall around the institution.

OMAHA, NEB.—P. E. Iler may erect a $400,000 hotel at Harney and 16th Sts.

CHEYENNE, WYO.—Bids are asked until Jan. 28 for furnishing and installing electric light fixtures, etc., in one post exchange and gymnasium at Fort D. A. Russell, Wyo. Capt. W. S. Scott, Q.-M. (Advertised, Engineering News.)

CHEYENNE, WYO.—W. S. Scott, Q.-M., informs us that bids were received on Dec. 14 for constructing buildings at Fort D. A. Russell, Wyo., as advertised for in Engineering News; bids were received also for wiring and heating work. Lowest bidders were as follows: For construction of one building: Robert W. Bradley & Sons, Cheyenne, $12,000; same bidders were lowest for two buildings at $17,500; for one building: Fraser, Richardson & Co., Denver, $13,301; for one, Stocker & Frazer, Denver, at $24,860; two buildings, same bidders, at $44,940; four buildings, M. P. Keefe, Cheyenne, at $14,635; two buildings, same bidder, at $3,682; one, Frager, Richardson & Co., $2,777; one, Ziegler & Dalton, Junction City, Kan., at $7,973; one, Robt. Bradley & Sons, at $4,100.

NEVADA, MO.—Bids are asked until Feb. 7 for construction of post-office building. James Knox Taylor, Supervising Arch., Treasury Dept., Washington, D. C. (Advertised, Engineering News.)

KANSAS CITY, MO.—Lower house of City Council has passed an ordinance condemning property intended for a site for new market in north end.

ST. LOUIS, MO.—Steps will be taken soon by Barnes Hospital Board of Trustees to secure plans for building projected hospital. Board is composed of S. M. Kennard, S. P. Galt and Samuel Cupples. A fund of nearly $1,000,000 is available.

DALLAS, TEX.—Baptists of this State will attempt to raise funds necessary to build a State University. Rev. S. H. Slaughter, of Ennis, is manager of enterprise. The buildings may be located in this city if plan is accomplished.

$250,000 may be appropriated toward erection of a high school. J. L. Long is Supt.

PUEBLO, COLO.—Assembly will be asked to appropriate 500 acres of land and $305,000 for new building for State Insane Asylum. Dr. W. W. Grant, of Denver, is Pres. of Comn.

DENVER, COLO.—The plans for the new St. John's Cathedral have been completed by Tracy & Swarthout, 156 Fifth Ave., New York. C. S. Holmstead is the bishop. Cathedral will have a seating capacity of 2,000 persons.

DENVER, COLO.—The El Jebel Temple Association has filed articles of incorporation. Company is to erect a $100,000 building for the members of the Ancient Order of Nobles of the Mystic Shrine. R. A. Kincaid may be addressed.

An 8-story office building is to be erected on the site of the burned Crystal Theater, at 17th and Curtis Sts., at a cost of $800,000, it is reported. Attorney A. W. Hillie mentioned as representative of property-owners.

WHATCOM, WASH.—Trustees of Whatcom Normal School will ask Legislature for $148,000 appropriation for new buildings, to be used as follows: Maintenance, $78,000; science annex, $40,000; heating annex, $4,000; furniture, $4,000; science equipment, $4,000; library, $1,000; campus, $8,000; dining hall, $2,500; summer school, $2,800; museum, $500; greenhouse, $1,200; repairs, $2,500.

SEATTLE, WASH.—Moritz Thomsen and W. D. Hoffus have purchased a site at Third Ave. and Cherry St. upon which will be erected a modern, fireproof building, 12 to 14 stories high.

Max Umbrecht, Arch., has prepared plans for 12-story building to be erected at Second Ave. and Yester Way for L. C. Smith, of Syracuse, N. Y. Total cost will be $400,000. J. W. Clise, Seattle, is representing Mr. Smith. Previously mentioned.

FT. LOGAN H. ROOTS, ARK.—Bids are asked by Robert R. Stevens, C. Q.-M., Department of Texas, San Antonio, Tex., until 11 a. m., Jan. 20, for the construction of a brick administration building, including installation of plumbing, hot water heat and wiring for electric lighting, at Ft. Logan H. Roots.

ORANGE, CAL.—An election will be held on Jan. 7 to vote on question of issuing $75,000 of bonds for building a city hall and constructing a system of water-works and an electric light plant. H. Wyneken is Cy. Clk.

ARROWHEAD, CAL.—Thomas Yerger, of San Bernardino, is stated to have been awarded contract for erecting $150,000 hotel at Arrowhead Hot Springs. Arthur B. Benton, 114 North Spring St., Los Angeles, is Arch.

OAKLAND, CAL.—Sutton & Weeks, Archs., San Francisco, Cal., inform us that no arrangements have been made regarding contracts for schools, mentioned on Dec. 8. Board of Education has commissioned architects to prepare plans for schools under the provisions of the recent school bond election, when $960,000 was voted for this purpose. Committee is composed of J. D. Isaacs, G. E. Randolph and F. M. Hathaway.

PASADENA, CAL.—Col. G. G. Greene, of the Hotel Greene, will erect an annex to his hotel to contain stores on the first floor and a theatre on the upper. It is expected that work will begin in the spring. Plans involve an expenditure of $110,000.

ALHAMBRA, CAL.—All bids for erecting high school building were rejected. The lowest bid was $33,000; the appropriation is $30,000. Changes in plans will be made. F. E. Williams, Clk. Board of Trustees. L. B. Valk Architectural Co., 424 and 425 Stimson Block, Los Angeles, is architect.

SACRAMENTO, CAL.—Bonds have been sold for new high school project.

OAKLAND, CAL.—Stone & Smith, Archs., 927 Market St., San Francisco, writes us that contract

LONGBEACH, CAL.—Charles F. Whittlesey is architect for proposed $500,000 hotel at this place. Geo. C. Martin is interested.

Henry P. Barbour will build a $75,000 apartment house here, it is said. A. L. Haley is Arch.

LONG BEACH, CAL.—The Long Beach Land & Hotel Co. has been incorporated with capital of $500,000 by Henry P. Barbour, O. W. Childs, J. B. Hartwell, George H. Bixby and others. Company will erect a hotel to contain 300 rooms. Charles F. Whittlesey, Arch. Manager Holmes, of the Hotel Greene, Pasadena, will be manager.

STOCKTON, CAL.—A special election will be held on Jan. 26th for the purpose of submitting the proposition of issuing $150,000 of bonds for the construction of a new city hall, and acquiring land for a site; $20,000 will be used for site. Geo. S. Wheatley is Clk. of Council.

BERKELEY, CAL.—Several buildings have been planned for University of California. John Galen Howard is University Architect.

LOS ANGELES, CAL.—Thomas Higgins will erect a 6-story hotel building on Third St., between Los Angeles and Main Sts. Architect is A. L. Haley.

J. W. Hellman will erect an office building facing on Fourth and Main Sts. Morgan & Walls are the architects.

SAN FRANCISCO, CAL.—The Pacific States Telephone building, to be erected at Bush and Mary Sts., will be eight stories high, with steel frame, concrete fireproof floors and fireproof throughout. It is planned to furnish the building with an elevator system. The front of the building will be of pressed brick, terra cotta and stone. Cost, $150,000. A. A. Cantin is Arch.

ST. JOHN, N. B.—The Daily Telegraph Co. may erect a $100,000 building on Church St.

HALIFAX, N. S.—John McInnes, of Halifax, has been awarded contract for construction of an immigration station, at $75,000.

MONTREAL, QUE.—Henry Birks & Sons will make an addition, 200 × 90 ft., to their property on St. Catherine St. and Phillips Sq.

Robert Simpson Co., Toronto, Ont., is reported to have secured option on site on St. Catherine St., on which it is proposed to establish a department store.

Building operations on proposed Alexandria Hospital will be undertaken at once, it is stated. It will cost about $200,000. E. & W. S. Maxwell are Archs.

MONTREAL, QUE.—Frost & Granger, Archs., 184 La Salle St., Chicago, Ill., are making plans for a railroad station, to be erected here for Grand Trunk R. R. Building is to be of similar design to the La Salle St. station, Chicago, with large covered train shed on approach to depot, fireproof, steel construction, brick, stone and terra cotta, plate-glass, steam heat, hardwood finish, electric light, nickel plumbing. $1,500,000. Bids will be received by architects next year.

TORONTO, ONT.—Toronto Y. M. C. A., Frank Pratt, Gen. Secy., has secured site on which to erect its proposed new $200,000 building.

Brereton & Manning, wholesale furriers, are to erect warehouse on south side of Wellington St.

TORONTO, ONT.—Thomas McQueen, Secy. Board of Control, writes us that on Jan. 2 the question of issuing $300,000 of bonds for exhibition buildings will be voted at municipal election.

WINNIPEG, MAN.—Government will erect here a new jail. It will cost $200,000.

Thomas Kelly, Winnipeg, has been awarded contract for building post-office in this city, at $529,000.

WATER SUPPLY AND IRRIGATION.

AUGUSTA, ME.—Trustees Augusta Water District are stated to have decided to secure new water supply from Carleton Pond. Pipe line about 8¼ miles long and pumping station will be required. Legislative leave will have to be obtained.

BANGOR, ME.—Citizens' League is urging that city water supply be secured from new source.

BATH, ME.—Committee, Mayor E. W. Hyde, member, is to report on the matter of purchase of plant and property of the Maine Water Co., which supplies Bath and adjoining towns with water.

LAWRENCE, MASS.—Water Board has awarded contract for furnishing 8,000 ft. 4, 6 and 8-in. pipe to Lynchburg Foundry Co. for $3,097.

ATHOL, MASS.—Town has voted to purchase local water works. Works will probably cost about $300,000. Albert Ellsworth is Selectman.

LEOMINSTER, MASS.—Town was to vote Dec. 27 on installing meters for all large users of water.

SPRINGFIELD, MASS.—Council has passed order authorizing special water commission to carry out their recommendations regarding improvement of Ludlow supply. The order provides for the construction of the filtration plant, the construction of the Ax Factory reservoir, the building of the new main from the reservoir to the filtration beds, and the various other improvements. The Mayor was authorized to ask legislative leave to raise $800,000 by a bond issue for the improvements. It was reported that he would veto the order. Special Water Commission consists of N. D. Winter, H. P. Stone and Q. M. Baker.

ATHOL, MASS.—Town is reported to be considering purchase of local water-works.

HOLYOKE, MASS.—Water Commissioners have instructed James L. Tighe, Cy. Engr., to take up preliminary work for the construction, in the near future, of a large reservoir on the Manhan water shed.

EAST GREENWICH, R. I.—Committee of East Greenwich Fire District have recommended that district construct or purchase a water-works.

WESTPORT, CONN.—Committee, E. C. Smith, Chn., is to secure terms for purchase of plant of Westport Water Co., now supplying this place with water and electric light.

NEW YORK, N. Y.—Bids are asked by Commissioner Water Supply, Gas and Electricity, 13 Park Row, until Jan. 6, for furnishing, delivering and laying high pressure fire service mains and appurtenances in Brooklyn.

Following were three lowest bidders, Dec. 21, for furnishing, delivering and laying water mains in various streets in Bronx Borough: Norton & Dalton Contracting Co., 27 West 140th St., New York, $95,654; Cunningham & Kearns Contracting Co., 440 East 91st St., New York, $97,303; Jos. Gallo, 127 Mulberry St., New York, $97,368. Itemized bids for this work will be given in next week's issue. For furnishing, delivering and laying water mains in various streets of Manhattan Borough, the following bids were received Dec. 21; all New York bidders: Norton & Dalton Contracting Co., 27 West 140th St., $79,053; Clinton Beckwith, Jerome Park, $87,982; Wilton Contracting Co., Williamsbridge, N. Y., $79,402; Cunningham & Kearns Contracting Co., 440 East 91st St., $80,181; P. Goodman, 108 East 117th St., $85,065; Jno. Cornwell, 69 East 127th St., $87,656; Louis D. Gregory, East 125th St., $92,266; Lloyd Collis, 13 Park Row, $84,840.

Following bids were received Dec. 21 for hauling and laying water mains and appurtenances in various streets of Brooklyn Borough; all Brooklyn bidders: H. Newman, $49,248; Dan. Douglas, $35,420; Jno. Cashman, $51,115; Isaac Harris, $36,718.

NIAGARA FALLS, N. Y.—Board Public Works has reported that new pumping station and filtration plant could be erected on site of present plant for $155,617. This estimate is for deepening and lining the wheelpit; two new water-wheels and extending penstock, shafting, etc.; 6,000,000-gallon pump, including foundation and installation; cost of pumping during installation of machinery; 5,000,000-gallon filtration plant, including building and connection with pumping station.

ONEIDA, N. Y.—Board Public Works is reported to be considering project to provide this city with soft water supply from South Corners.

ARCADE, N. Y.—Village voted Dec. 20 on purchase of plant of Wyoming & Cattaraugus Water Supply Co. for about $20,000.

FREEPORT (L. I.), N. Y.—Town Board of North Hempstead is stated to have refused application for franchise of corporation to be known as North Hempstead Water Supply Co. Establishment of water system by the town is advocated.

DUNDEE, N. Y.—Village may vote on proposition for combined system of water works and electric light.

MEDINA, N. Y.—Village is reported to have purchased new source of supply for water works.

LUMBERTON, N. J.—Municipal works discussed.

IRVINGTON, N. J.—Municipal works reported under discussion.

PITTSBURG, PA.—Bids are asked by City Controller until Jan. 3 for furnishing water meters. William B. Hays, Mayor; Edward M. Bigelow, Dir. Pub. Wks. Ordinance has been passed by Council authorizing purchase of 5,000 meters for $10,000.

It is reported that specifications for the new city filtration plant, mentioned in our issue of Dec. 8, were to be ready by Dec. 23, and that contracts for its erection would be let about Jan. 15.

HARRISBURG, PA.—Water Department will probably ask for $10,000 for new mains for next year.

CHAMBERSBURG, PA.—Mayor Chauncey Ives, C. E., Chambersburg, is stated to have reported that gravity system of mountain water could be installed for $100,000. (Mentioned Nov. 17).

LOUISBURG, N. C.—See under Sewers.

OXFORD, N. C.—Water works and electric fights discussed, according to reports.

WASHINGTON, GA.—Specifications for improvement of water supply of this city are on file at office of Engineering News, 220 Broadway, New York. Bids for above work are asked until Jan. 5 as adverfised in Engineering News Dec. 15 and 22.

PENSACOLA, FLA.—Referring to projected new water company for this place, Chas. H. Bliss writes that it is proposed to obtain the supply from wells. No contracts have been awarded, nor machinery or materials ordered. With the exception of filters and possibly stand-pipe, complete outfit will be needed. Bids will be asked for latter part of January. Estimated cost of the work is $200,000.

MONTGOMERY, ALA.—Contracts for material for extension of city water system are stated to have been let as follows: Gate valves and screw valve boxes, Herron Pump & Foundry Co., Chattanooga, Tenn.; gates valves, Liddell Machinery & Supply Co., Montgomery, $5,000. Hardie Tynes Mfg. Co., Birmingham, was low bidder at $9,840 for furnishing air compressor of condensing engine type.

BUNKIE, LA.—Committee, W. G. Branch, Member, is to take up matter of construction of water system.

MARKSVILLE, LA.—Election was to be held Dec. 26 to vote on special tax for putting in water works and purchase of local electric light plant. Ira W. Sylvester, C. E., Alexandria, La., has been making examinations as to cost of putting in works.

MACON, MISS.—Contract for construction of water-works system for this city was let Dec. 22 to Edward J. O'Beirne, Memphis, Tenn. The works will cost $30,000.

COOKEVILLE, TENN.—City votes to issue $25,000 of bonds for erection of water works, electric lighting and street improvements. J. Arnold is Mayor.

NORWOOD, KY.—Board Public Service has requested its solicitor to render an opinion as to its right to require water consumers to install meters on and after Jan. 1.

SMITHS GROVE, KY.—In our issue of Dec. 22 we had a news note stating that a company proposed to install water-works here at a cost of about $10,000. The item should have appeared under the name heading as given above instead of Smiths Grove, Pa. In regard to the above work, we are informed, under date of Dec. 24, that no contracts or specifications had been made at time of writing. Supply is to be from deep wells. J. R. Kirby is Mgr. of the company and official in charge.

ALLIANCE, O.—Board Public Service is reported to have submitted to Council project for improvement and enlargement of the water system to cost $117,000. C. C. Baker is member Bd. Pub. Ser.

CINCINNATI, O.—Bids are asked by Commissioners of Water Works until Jan. 20 for purchase of $1,000,000 worth of water works bonds. August Hermann, Pres.

LAKEWOOD, O.—Rocky River Water Co., supplying Rocky River Village, has made offer to this place to put in system of pipes to supply it with filtered water. R. F. Edwards is Chn. Village Com.

NEWARK, O.—Board of Health is stated to have ordered the superintendent of the Newark Water Co. to filter the city water.

SOUTH BEND, IND.—A. J. Hammond, Cy. Engr., is stated to have submitted a plan to Council for increasing water supply. According to this, construction of new plant on east side of Mill race is proposed. Total estimated cost of work is $65,000, divided up as follows: Station, site of Central Station Reservoir, building, wheels, harness and 3,000,000-gallon pump, $19,000; generator, $6,000; power, $10,500; reservoir, 5,000,000 gallons, $20,000; new pipe line, $10,000.

Information concerning contracts to be let or supplies to be furnished, and corrections of errors and omissions in published items, are invited. Full details regarding the equipment, tools, etc., required for the proposed improvements are specially desired.

JEFFERSONVILLE, IND.—City has reached an agreement with Jeffersonville Water Supply Co., and it is reported that company will now tap its new source of supply.

MUNCIE, IND.—Council is reported to be taking steps to force the Muncie Water Works Co. to drill wells for an additional supply.

SAGINAW, MICH.—City Engineer and Chief of Fire Department are reported to have recommended that all 4-in. pipes be replaced by 6-in. pipes.

ASSUMPTION, ILL.—John Heerdegen, Hydr. Engr., New York, is to report on possibility of securing water supply for this place by artesian wells. E. W. Hight and S. A. Shafer are interested.

BLOOMINGTON, ILL.—We are informed that matter of piping Miller Lake water to the city mains has been discussed, but it is probable that nothing will be done. Elmer Folsom is Cy. Engr.

PARIS, ILL.—Council has passed ordinance appropriating $5,000 for water works extension to the Commercial Club Addition.

APPLETON, WIS.—Special Committee is considering another proposition of Appleton Water Works Co. for sale of its plant and entire rights to city for $315,000.

MANITOWOC, WIS.—Referring to project for municipal water-works, the mayor writes that it is proposed to purchase plant of Manitowoc Water-Works Co., and not to construct works.

INDIANOLA, IA.—Water works is reported to have been sold to local parties, who will, it is stated, make several improvements.

CHARITON, IA.—It is stated that contracts will be let in the spring for water works for this place to cost $40,000.

ALGONA, IA.—It is stated that plans have been prepared for a sand filtration plant.

DENISON, IA.—Commercial Club is advocating betterment of city water service.

ST. PAUL, MINN.—Contract for supplying meters during coming year has been let to National Meter Co. Contract will probably amount to about $7,500.

HASTINGS, MINN.—Bids are asked by City Council until Jan. 9 for plans and specifications for water works system. Plans are to include making survey of grounds and establishing levels; all plans and specifications for pumping plant, stand pipes, hydrants, etc., examination of wells, analyses of water and complete profile of work together with cost of plant. Plans and specifications for sewerage system are wanted also. N. J. Steffen, Cy. Clk.

NEWCASTLE, NEB.—Bids are asked by Village Trustees until Jan. 12 for furnishing materials and labor for construction of water-works, the cost of which is not to exceed $6,500. D. A. W. Perkins, Village Clk.

MISSOULA, MONT.—A. H. Wethey, of Butte, Mont., representing the interests of Senator W. A. Clark, has filed notice of his intention to appropriate 12,000 cu. in. of water from the Big Blackfoot River for manufacturing, domestic, irrigation and other uses, and the right is claimed in connection with the water right to build dams, ditches and other means for the utilization of the water appropriated.

GLENDIVE, MONT.—Election has been called for Jan. 7 to vote on $50,000 bond issue for installing water works. Proposed system includes pumping station and settling tank on Yellowstone River, reservoir and mains along principal streets.

STEVENSVILLE, MONT.—Residents of May Addition are reported to be planning installation of private system of water works to cost about $5,000, and to consist of reservoir and wooden mains. Thos. Baird and James M. Higgins are interested.

FARGO, N. DAK.—Council has awarded contract for new steam pump to Fairbanks, Morse & Co., Chicago, Ill., for $3,686.

WINDSOR, MO.—Question of water works for this place was to be voted on Dec. 29.

GRAVETTE, ARK.—Stated that an improvement district has been formed here to put in water works.

JEFFERSON, TEX.—Contract for complete water supply plant for this place, bids for which were opened Dec. 15, has been let to McQuatters Plumbing & Machine Co., Hillsboro, Tex., for $9,989.

DENTON, TEX.—We are informed that city has voted to issue $25,000 of bonds for new city water works. Supply is to be from wells. Mayor W. L. McCormick is official in charge.

ORANGE, TEX.—Adams Bayou Canal Co. has awarded contract for construction of irrigation canal, requiring removal of 100,000 cu. yds. dirt to C. E. Slade, Orange.

GUTHRIE, OKLA.—Council has closed contract with James Smith, of Denver, Colo., owner of local electric light plant, pumping water for local water works station. By the agreement Mr. Smith is to spend $30,000 on a pumping station and is to erect 150,000-gal. stand pipe.

COLORADO SPRINGS, COLO.—Advices from this city state that Col. J. P. Pomeroy, of Colorado Springs, intends to organize a company, which will have for its object the reclamation of from 10,000,000 to 15,000,000 acres of semi-arid land in Colorado, Texas, Wyoming, New Mexico, Kansas and Nebraska.

GILLETT, COLO.—By recent decision of the Court a $25,000 bond issue for establishing water works for this town has been rendered null and void.

MONTROSE, COLO.—Special election has been called for Jan. 10 to vote on issuance of $100,000 bonds for building new water works.

CORTEZ, COLO.—We are informed that water is to be obtained from Dolores River for proposed $500,000 irrigation system of the Montezuma Valley Irrigation District. W. H. Wigglesworth, Cortez, is Des. Engr. and G. M. Longenbaugh is Secy.

SPOKANE, WASH.—Commissioner received following bids Dec. 16 for proposed standpipe in Lidgerwood Park: McCreary & Willard, $12,360; Peter Costello, $12,380; Joe Zirngibel, $14,490; Puget Sound Bridge & Dredging Co., $17,199; I. J. Bailey, $19,470.

NORTH YAKIMA, WASH.—Water works franchise has been granted Northwest Water & Light Co., and it is stated that new systems with source of supply ten miles up Naches River is to be put in.

SEATTLE, WASH.—Ordinances have been passed by Council ordering the laying of water mains involving total expenditures of $71,950. R. H. Thomson is Cy. Engr.

SANTA ROSA, CAL.—We are informed that bond issue will be voted on within next month to provide funds for purchase of new 2,000,000-gal. pump for city works, and also for extension of sewer system. L. E. Rickesecker is Cy. Engr.; J. P. Overton, Mayor.

HOLLISTER, CAL.—Local reports state that W. T. Garrett, of San Francisco, who has an option on the Hollister Irrigation Co.'s plant, has sent engineers into the field examining the water sheds, reservoir sites, etc. It is proposed to construct a storage reservoir, to furnish water for the irrigation of the entire valley. Hollister Water Co. is also said to have been bonded to capitalists, and it is expected that a number of improvements will be made.

SAN DIEGO, CAL.—It is reported that Board Public Works is to at once call for bids for laying about 40 miles of water mains and 45 miles of sewer mains.

HAZEN, NEV.—Bids were received at office U. S. Reclamation Service, Hazen, Dec. 15, for construction of lateral ditches with structures and Carson River old channel canal. The itemized bids are given under Contract Prices. The following were the lowest bidders on each division: San Francisco Construction Co., 26 Montgomery, San Francisco, Cal., Division 1, $28,228, Division 2, $56,082, Division 6, $45,277; Utah Construction Co., Ogden, Utah, Division 3, $46,095, Division 4, $71,642; Pacific Coast Construction Co., Portland, Ore., Division 5, $43,550.

PAYETTE, IDAHO.—Contract for city water works is stated to have been let to Pacific Coast Pipe Co., for $10,774.

SALT LAKE CITY, UTAH.—Following applications for water appropriations have been filed with the State Engineer: Francis McDonals, Murray, Utah, 100 second ft. from Big Cottonwood, to be used to irrigate 5,000 acres; Frank C. Kelsey, Salt Lake City, 2,000 second ft., from Green River in Emery and Grand Counties, to be diverted at a point near the southwest corner of Sec. 3, township 20, the diverting works to consist of a dam 10 ft. high and 400 ft. long, the water to be used to develop 11,000 H P., for pumping for irrigation works and furnish power for mining and smelting; Frank Cook, Green River, Utah, 975 second ft. from Green River, in Emery County, to develop 1,200 HP. for irrigation plant.

WINNIPEG, MAN.—Bids are asked by Chairman, Fire, Water and Light Committee, until Jan. 2, for supply of 200 6-in. and 150 4-in. water-works gate valves. H. N. Ruttan, Cy. Engr.; C. J. Brown, Cy. Clk.

NEWCASTLE, N. B.—Willis Chipman, Consult. Engr., Toronto, Ont., has recommended installation of additional pumping engine for water-works plant. Reservoir may also be extended.

WOLSELEY, N. W. T.—By-law to provide funds for fire protection purposes will be voted on.

SEWERAGE.

YORK, ME.—A committee, composed of J. C. Stewart, W. H. Hogarth, A. M. Bragdon, J. P. Bragdon and Josiah Chase, has investigated sewerage conditions and will submit a report. Roland W. Libby, C. E., of Saco, Me., is engineer-in-charge.

HARTFORD, CONN.—Bids are reported asked until Dec. 31 by Comrs. River, Bridge and Highway District, Room 52, Aetna Life Bldg., for constructing a drainage system in railroad yard north of Morgan St., requiring about 3,700 lin. ft. tile and 37 catch-basins. Morgan G. Bulkeley, Pres.

ALBANY, N. Y.—Bids are asked until Jan. 3 for building Third St. sewer. Isadore Wachsman, Clk. Bd. Contract and Supply.

NEW YORK, N. Y.—Board of Aldermen has passed resolution providing for issuance of $10,000 of corporate stock for preparing plans, etc., preliminary to work of constructing Unionport sewer system. This system is said to be the beginning of a large project to drain territory east of Bronx River, about 14,500 acres. Louis Haffen, Pres. Bronx Boro., may be addressed. The first instalment will be the completion of about 15 miles of sewer at an estimated cost of about $700,000. This includes a trunk line 16 ft. in diameter. The territory immediately benefited will extend from the Bronx River to West Chester, to Throgg's Neck, to Classon Point, to Pelham Parkway and to Classon Point road.

SARANAC LAKE, N. Y.—An election will be held next March to vote on the proposition to construct sewers and water works to cost about $73,000. Elwood Wilson, C. E., is interested.

SYRACUSE, N. Y.—Emil Kuichling, C. E., of New York, has prepared plans for improving Onondaga Creek, in collaboration with Henry T. Beach, of Syracuse. Estimated cost is $300,000.

WEST LIBERTY, PA.—It is planned to build a borough sewer, cost of which has been placed at $100,000. At January meeting of Council the matter will be presented by property owners.

PHILADELPHIA, PA.—The following bids are reported to have been received on Dec. 15 by P. E. Costello, Dir. Dept. Pub. Works, for repairing sewers, drain pipes and inlets of the entire city: Chas. D. Land, $18,000; B. Monohan, $14,500; W. H. H. Achuff, $17,000; and James M. West, $11,000.

LOUISBURG, N. C.—Bids are asked until Jan. 15 for construction of water-works and sewerage for this town. T. H. Lacy, Secy. Com. (Advertised, Engineering News.)

CANTON, MISS.—City has voted against the $50,000 bond issue for constructing sewer system.

MARION, S. C.—City has voted to issue $25,000 of bonds for purpose of constructing a sewer system. W. J. Montgomery, H. C. Graham and P. Y. Bethea were elected commissioners of public works, and will be in charge of construction.

LEBANON, IND.—Bids are asked until Jan. 9, 7 p. m., for construction of Third Ward sewer. Edmund Connor, Cy. Clk.

ELYRIA, O.—Plans prepared by Riggs & Sherman, Engrs., of Toledo, have been adopted for sewer system to be installed on east side of river. W. C. Parmely, of New York, may be commissioned as consulting engineer.

COLUMBUS, O.—Ex-Councilman F. W. C. Weichers, representing the South Columbus Improvement Association, is interested in movement to secure sewer system for the south side section.

PAINESVILLE, O.—N. P. Cummings, Cy. Engr., writes us that $12,500 of bonds, previously noted as having been issued, is for purpose of continuing work begun this season on a storm water sewer system. Plans prepared by City Engineer have been adopted by Council. Plans call for 15 to 36-in. pipe sewers; average depth, eight feet, except 1,800 ft. that will run from 8 to 21 ft. in depth. Contracts will be let in spring for construction work. Cost, about $30,000.

YOUNGSTOWN, O.—Sewer will be constructed in east end district, emptying into Mahoning River at East Federal St. bridge. It will be about 6,000 ft. long and cost $50,000. Philip Hagan, of Board of Public Service, may be addressed.

GRAND RAPIDS, MICH.—City engineer's department has completed estimates of cost of proposed west side trunk sewer. Three plans are under consideration, as follows: Plan No. 1 contemplates using the Lake Shore Railway embankment to shut off the river in time of high water from the land to the north. An embankment would also be carried from Grand River to Butterworth Ave. to protect the sewer and give access to the pumping station. Cost: embankment, $14,400; cost of sewer with accessories, $117,940; pumping station, complete, $15,870; engines and pumps, $50,000; total, $198,210. Plan No. 2: Raising the Lake Shore embankment from near Earle St. to the west city limits and connecting such embankment with Butterworth Ave. The pumping station at the river bank would be connected with the Lake Shore tracks by embankment to the present elevation of Butterworth Ave. Cost: sewer, $117,940; embankment, $31,200; pumping station, $15,870; engines and pumps, $60,000; total, $225,010. Plan No. 3: Raising South Front St. from West Fulton St. to Wealthy Ave. and carrying the embankment along the north bank to the bluffs west of the city line. Cost: sewer, $117,940; embankment over sewer, $2,477; further embankment, $171,816; engines and pumps, $60,000; gates, etc., $8,680; total, $382,500.

DES MOINES, IA.—A 42-in. sanitary sewer may be built in 21st St., beginning at 21st and High Sts. and running north and west. A resolution of necessity has been filed by property owners in this district.

CRESCO, IA.—Bids are asked until Feb. 1 for constructing three sewers. All to be of 8 in. vitrified sewer pipe, cemented joints. No. 1 to be 1,670 ft. in length, with four manholes and one flush tank. No. 2 to be 1,800 ft. in length, with four manholes and one flush tank. No. 3 to be 2,800 ft. in length, with six manholes and one flush tank. Bids must be for each of the sewers separately. W. L. Richards, Chn. Sewerage Com.

DAVENPORT, IA.—Bids are asked until Jan. 3 for building several sewers. Thomas Murray, Cy. Engr.

HASTINGS, MINN.—See under Water-works.

ST. PAUL, MINN.—Board of Public Works has awarded contracts for sewers in the following streets: Juno St., View to Chatsworth, to E. J. Kirkland, at $5,200; estimate of city engineer, $5,578. Stewart Ave., Tuscarora to Bay, to John Lind, at $2,395; estimate, $2,467. Watson Ave., View to Victoria, to E. J. Kirkland, at $2,200; estimate, $1,970. Bids for a sewer on Arbor St., from Palace to Jefferson, were taken under consideration. John Lind was the lowest bidder at $2,100. The estimate of the engineer was $1,700.

IOLA, KAN.—Bids are asked until Jan. 19 for construction of a septic tank, sludge pit and main and lateral sewers. Luke P. Stover, Cy. Engr. Elmer Remsberg, Cy. Clk. The approximate quantities are as follows: One septic tank; 800 cu. yds. of excavation for septic tank; 230 cu. yds. of excavation for sludge pit; 110 cu. yds. of broken stone concrete; 58,000 brick laid in walls, arches and areaways; two grit chambers; one valve chamber; three 12-in. valves; one 18-in. valve; one 24-in. valve; one outfall abutment; 130 lin. ft. of 12-in. pipe; 11,777 ft. of 6 to 18-ft. excavation; 11,777 ft. of 8-12-in. vitrified sewer pipe; 27 manholes; eight flush tanks; one lamp hole.

OKLAHOMA CITY, OKLA.—Bids are asked until Dec. 21, 6 p. m., for construction of an 8-in. lateral sewer. T. A. Blaise, Cy. Clk.

MUSKOGEE, IND. T.—W. W. Cook & Sons, Junction City, Kan., have contract at $40,995 for laying mains and constructing settling basin, and the Jackson Filter Co., St. Louis, Mo., has contract at $5,750 for construction of filters in connection with water-works extension and sewerage system, it is reported.

PINE BLUFF, ARK.—Herman C. Gass, Bellwood, Ill., has contract for a sewer in district No. 11, at $14,395.

KIRKWOOD, MO.—Plans have been drawn for construction of sewer system for this place. Four septic tanks will be built.

PACIFIC GROVE, CAL.—J. A. Wolfe has been awarded the contract for the construction of a sewer in Cedar St., at $1,248; also in Granite St., at $6,120.

SAN DIEGO, CAL.—See under Water-Works.

SANTA ROSA, CAL.—See under Water-works.

LOS ANGELES, CAL.—Bids for supplying the city with 1,000,000 brick for the outfall sewer were received as follows: Simons Brick Co., 1,000,000 brick at $7.90 per 1,000; Los Angeles Pressed Brick Co., 1,000,000 brick at $10 per 1,000; Southern California Brick Co., 1,000,000 brick at $8.90 per 1,000. It is said that City Engineer Stafford is preparing specifications that will provide for substitution of concrete for sewer brick in building new outfall sewer and storm drains.

BERLIN, ONT.—Vote will be taken on a by-law Jan. 2 to raise $65,000 for a new sewage disposal system.

STREETS AND ROADS.

RUTLAND, MASS.—The following bids were received by Massachusetts Highway Commission Dec. 22 for building a section of state highway about 5,800 ft. in length in Rutland: John A. Gaffey, Medford, $8,166; Frank Williams, Boston, $8,311; Ferranti & Maguire, Worcester, $6,426; H. Gore & Co., Boston, $6,888; Jos. McCormick, Providence, R. I., $6,447; R. F. Hudson, Melrose, $6,536; Bruno & Milano, 293 North St., Boston, $6,367 (awarded contract); Ed. J. Rourke, Abington, $6,456; John F. Mague, Taunton, $7,397; Amos D. Bridge, Hazardville, Conn., $6,451.

POMFRET, CONN.—Contract for construction of 2,548 ft. telford road and 365 ft. macadam in Pomfret has been awarded by Highway Commissioner McDonald to C. W. Tryon, of Meridan.

BROOKLYN, N. Y.—Board of Estimates has authorized the widening of Livingston St. Est. cost, $4,000,000.

CORTLAND, N. Y.—Bids are asked by Board Public Works until Jan. 2 for paving several streets.

ALBANY, N. Y.—Bids are asked by Board of Contract and Supply until Jan. 3 for improving South Pearl and Dallius Sts. by grading, curbing, paving carriageway with asphalt blocks, repairing sidewalks, and building basins; also laying a plank walk on Block Road. Isidore Wachsman, Clk.

NEW YORK, N. Y.—The following were the lowest bids received Dec. 23 by Louis F. Haffen, Pres. Boro. of Bronx, for paving, grading, etc., in nine streets: (1) Withdrawn; (2), P. J. Brennan, $34,186; (3) Thos. Murray, $3,744; (4) J. C. Rogers, Mott Ave. and 149th St., $17,709; (5), Thos. Murray, $2,062; (6), (7), (8), J. C. Rogers, $1,979, $1,412 and $1,130, respectively; (9) Wm. Porter, $2,786.

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ATLANTIC CITY, N. J.—It is stated that bids will be received by City Engineer Hackney until Jan. 16 for paving Atlantic Ave.

WEST HOBOKEN, N. J.—Wm. Nolan, of West Hoboken, was awarded contract by Town Council for paving Summit Ave. Bids were opened Dec. 14.

PHILADELPHIA, PA.—The following are the bids received by Peter E. Costello, Dir. Dept. Public Works, for paving work: Repairs to paved streets for entire city in 1905: M. O'Rourke, $127,000; Mack Paving Co., $12,000. M. & J. B. McHugh, $153,000. Maintenance of improved and macadamized highways of entire city: D. [illegible], $128,000; E. H. Vare, $120,000; W. H. Achuff, $135,000.

BALTIMORE, MD.—The First Branch of City Council is stated to have passed ordinances providing for appropriation of $10,000 for paving with asphalt [illegible] a portion of Park Ave.; also for paving with [illegible] a portion of Patuxent St.

TROY, ALA.—Pike County contemplates issuing $150,000 of bonds for improving roads. Address A. C. Adkinson, Judge of Probate.

NASHVILLE, TENN.—City Council has adopted a resolution asking the legislature to pass an enabling act authorizing Nashville to issue $500,000 bonds for street work.

COOKEVILLE, TENN.—Bonds will be issued for street improvements. Address Mayor for information.

LOUISVILLE, KY.—J. H. Wellen, Chn. Bd. Pub. Wks., informs us that Frankfort Ave. will not be improved in the immediate future.

TOLEDO, O.—Bids are asked by Board Public Service until Jan. 3 for paving a portion of Norwood Ave.; also repaving portions of Prescott and Huron Sts. Henry S. Jones, Secy.

Bids will be received Jan. 11 for $53,753 paving bonds. R. G. Bacon, Cy. Audr.

Russell & Jennison, City, will put in 14,000 yds. paving in Mobile, and 25,000 yds. paving in Birmingham.

ORRVILLE, O.—Bids are asked by S. W. Jackson, Village Clk., until Jan. 14 for improving West Market St.

CINCINNATI, O.—$60,000 is to be appropriated for street improvements. Geo. F. Holmes is Clk. Bd. Pub. Service.

NORWOOD, O.—We are informed that Thos. Howard, Jr., 4936 Montgomery Pike, City, was awarded contract for grading, macadamizing and gravelling a portion of Wayland Ave. for $1,950. J. A. Stewart, Cy. Engr., 511 Traction Bldg., Cincinnati.

RENSSELAER, IND.—Bids are asked by Jasper County Commissioners until Feb. 7 for construction of gravel roads, amounting to 13½ miles. James N. Leatherman, County Audr.

KNOX, IND.—Bids are asked by County Commissioners until Jan. 16 for macadamizing and paving in several townships, in all about 16,100 ft. John W. Kurtz, County Audr.

JEFFERSONVILLE, IND.—Victor M. Lyon, Cy. Engr., is preparing plans for reconstructing Market St. 1½ miles with granitoid sidewalks, stone curb and vitrified gutter; also Walnut St. 4 blocks of granitoid sidewalks.

TERRE HAUTE, IND.—County Commissioners have awarded to W. H. Harris the contract for constructing about 16 miles of roads in Otter Creek and Nevins Townships for about $27,000.

Vigo County contemplates expending about $45,000 on gravel roads. Address Jerome Denehie, County Audr.

DAVENPORT, IA.—Council is considering paving of 51 blocks for next year.

BURLINGTON, IA.—We are informed that Young & Buescher, City, have been awarded contract, at $6.27, for paving Fourth St.; and Burlington Construction Co., City, contract for paving Vine St., at $7,912. Wm. Stephois, Cy. Engr.

ST. PAUL, MINN.—Barber Asphalt Co. was awarded contract for paving Franklin St. by Board Public Works for $15,512.

OKLAHOMA CITY, OKLA.—All contracts made by city at a recent meeting, amounting to $50,000, were withdrawn by Council and City Clerk ordered to readvertise for bids on same. It is claimed that contracts were made under an irregular guarantee limit.

SEATTLE, WASH.—The following ordinances have been passed: Planking Ewing St., Vine St. and others, $7,950; concrete walks on Tenth Ave., North, $10,000; grading on Atlantic St., Westlake Ave. and others, $57,750. R. H. Thomson is Cy. Engr.

TACOMA, WASH.—Contracts for improvement in Districts No. 239 and 240 were awarded to Milton Savage & Co., $18,433, and McHugh & Kibler, $20,770, respectively.

OAKLAND, CAL.—The improvement of a number of streets were recommended to be improved by Street Committee.

BAKERSFIELD, CAL.—The bid of Malloy & Mahoney of $300,000 for construction of Kern River Road was rejected, and it was ordered by Board of Supervisors that new bids be asked for construction of the road. Bids will be received until Jan. 4.

PETALUMA, CAL.—Resolution of intention was passed by Board of Trustees to order that Kentucky St. be graded, curbed with basalt blocks, guttered and macadamized. A. S. Newburgh, Clk.

NAPA, CAL.—Bids are asked by Board of Supervisors until Feb. 14 for constructing road in Dist. No. 11. N. W. Collins, Clk.

SANTA BARBARA, CAL.—Bids are asked by Alfred Davis, Cy. Clk., until Jan. 5 for grading, curbing and paving Canon Perdido St.

MONTREAL, QUE.—Road Committee will ask $300,000 for permanent sidewalks and pavements during the year 1905.

MANUFACTURING PLANTS.

WOONSOCKET, R. I.—Chas. Tiberghien and Jean Tiberghien, members of the firm of Charles Tiberghien & Bro., of Tourcoing, France, have petitioned Common Council for exemption from taxes for ten years. The petition stated that the company would build a $500,000 plant in Woonsocket if such exemption was granted. The plant is to manufacture worsteds. The matter will be settled at once.

WATERBURY, CONN.—The Waterbury Clock Co. has increased its capital stock from $1,000,000 to $2,000,000.

PITTSBURG, PA.—Building and land costing $50,000 have been bought by Pittsburg Dry Goods Co. for the manufacture of blankets, superseding the plant now operated by company at Greenville. Other buildings are to be erected at once for enlarging the business.

TARENTUM, PA.—Additions to plant of Allegheny Steel & Iron Co., costing about $65,000, are to be made soon.

BALTIMORE, MD.—The Maryland Oil Clothing Co. has been incorporated with $100,000 capital stock, for manu-

facturing oil clothing, by Leonard H. Weil, 213 North Eutaw St.; Louis J. Nathan and Henry Laupheimer, 101 West Pratt St.

CUMBERLAND, MD.—The Maryland Car Wheel Mfg. Co. has been incorporated with $25,000 capital by John Daroth, Conrad G. Smith, John T. Edwards and others.

ELKTON, MD.—It is reported that the James T. Powers Foundry Co. will enlarge plant and erect pattern shop.

BALTIMORE, MD.—Frank W. Sundruck, carriage manufacturer, Howard and Tyson Sts., has awarded contract to Russell Construction Co., 17 East Saratoga St., for construction of carriage factory to be located at Howard and Tyson Sts., after plans by Henry J. Tinley, Archt., 421 St. Paul St. Brick, four stories, 27 × 75 ft.

HAGERSTOWN, MD.—The Black Rock Knitting Co. has increased its capital from $10,000 to $15,000. S. A. Snider is Pres.

WASHINGTON, D. C.—The following improvements to navy gun factory at navy yard, are asked for: New machinery for existing shops, $150,000; building sighting chimney, $87,000; machinery for same, $150,000; foundry, shop, $369,170; machinery for same, $121,075; gun shops for moderate size guns, $190,800; machinery for same, $368,-930; locomotive, $8,000; boilers, $50,000; locomotive house, $61,747; machinery for same, $12,000; forge shop, $124,937; forge and machinery for same, $148,000; extension of east and west gun carriage building and erecting shop, $334,448; machinery for same, $660,232.

WINCHESTER, VA.—C. L. Robinson will erect a cold storage plant here.

ROANOKE, VA.—The Stone Printing & Mfg. Co. will double the capacity of its plant at an early date.

SUFFOLK, VA.—G. A. Bozman & Co. will erect a cotton yarn mill here.

RANDALL, W. VA.—The Star Glass Co., of Randall, has been chartered for the purpose of manufacture of glass, and to make all necessary tools and equipment for the manufacture of same. Capital, $100,000. Incorporators: Frank N. Carter, Monaca, Pa.; Geo. E. Cleveland, Rochester, Pa.; David S. Brewer, Randall; Garrison McClure and August Boehler, Morgantown.

MARLINTON, W. VA.—Band saw mill of Greenbrier River Lumber Co. was destroyed by fire. Loss, $35,000.

HUNTINGTON, W. VA.—The Huntington Chemical Co. has been chartered for the manufacture of drugs and chemicals. Capital stock, $25,000. Incorporators: R. Stern, J. B. Stevenson, Homer Bell and C. L. Taylor, of Huntington, and H. E. Harrison, of Newark, O.

ANDREWS, N. C.—The Cherokee Lumber Co., capital $25,000, has been chartered here. Incorporators: G. F. Stockert, C. A. Munson, M. F. Stockert, S. A. Newton, E. E. Bailey, Buckhannon, W. Va.

BELLWOOD, N. C.—The Gantt Harness Co., capital $10,000, has been chartered here by O. B. Ford, W. R. Porter, J. A. Peeler and S. C. Hendricks. The company will establish tanneries, manufacture harness and other leather products.

SPARTANBURG, S. C.—The Lion Furniture Co. will increase its capital from $25,000 to $50,000. H. E. Ravenel is Pres.

TOWNVILLE, S. C.—Fire destroyed the cotton gin and oil mill located here. Loss, $20,000. L. N. Geer is president of the company.

SUMTER, S. C.—The Sumter Machinery Co., capital $12,000, has been chartered here, with W. B. Burns, Pres. The construction of the plant will begin in about 60 days and it will be ready for business in the early spring. The company will operate an iron foundry, manufacture woodworking machinery, and have a thoroughly equipped shop for all kinds of repair work.

COLUMBUS, GA.—E. N. Clemence, of Charlotte, N. C., is organizing a company here to build a $250,000 cotton mill.

ATLANTA, GA.—J. A. Drake, of Corning, N. Y.; Horace A. Fields, of Knoxville, Tenn.; Marion M. Jackson and A. J. Orme, of Atlanta, have filed application for a charter for North Georgia Lumber Co., with a capital of $150,000, of which $100,000 has been paid in. The corporation will deal in timber and mineral lands, cut timber, erect saw and planing mills, smelters and ore breakers, and manufacture articles. The head offices will be in Atlanta.

MACON, GA.—Manufacturers will establish crate factory, and are erecting machinery building 100 × 150 ft. Frank W. Hazlehurst, Secy. Georgia Fruit Growers' Association, can probably give information.

ATLANTA, GA.—The William A. Harris Mfg. Co., capital $10,000, has applied for a charter. Incorporators: Wm. A. Harris and Thomas L. Bishop, of Atlanta, and Thomas C. Hadley, of Brooklyn. Company will manufacture soda water appliances and supplies. The head offices will be in Atlanta.

JEFFERSON, GA.—It is reported that the directors of Jefferson Cotton Mills have decided to purchase additional machinery for their plant at this place.

COLUMBUS, GA.—E. N. Clemence, of Charlotte, N. C., has organized a company to erect a $250,000 cotton mill in this city, to manufacture colored goods.

FLORIEN, GA.—It is reported that the N. A. Ayres Lumber Co. will erect saw mill with a capacity of 40,000 ft.

CORDELE, GA.—H. L. Finger has contract to erect mill building, 100 × 40 ft., for P. C. Clegg. About $7,500 will be invested.

CANTON, GA.—Georgia Marble-Finishing Works, recently organized, will erect 60-ft. addition. T. M. Brady is Pres.

MOBILE, ALA.—The Republic Creosote Co., Indianapolis, Ind., will establish a $40,000 creosoting plant here. C. L. Lauretta can give information.

MOBILE, ALA.—Kennedy Stave & Cooperage Co., of Birmingham, will shortly erect stave manufacturing and finishing plant. J. B. Kennedy will be in charge.

ANNISTON, ALA.—The Anniston Knitting Mills will build a 2-story addition, 70 × 120 ft.

ANNISTON, ALA.—W. W. McAfee has secured site on which to erect plant for the manufacture of sand and cement building and paving stone.

HUNTSVILLE, ALA.—A mill for making rope and twine from waste product of local cotton yarn and cloth mills may be established here. Secretary Chamber of Commerce can inform.

FLORENCE, ALA.—The Florence Wagon Works will establish a buggy factory to be operated in connection with their plant.

MOBILE, ALA.—J. S. Farren & Co., of Baltimore, Md., will establish a $100,000 canning factory here.

NEW DECATUR, ALA.—H. T. Gill will erect a plant here for the manufacture of wagon timber.

UNIONTOWN, ALA.—The Ellawhite Cotton Mills Co. will add 2,500 ring spindles for manufacturing yarns, warps and skeins, at a cost of $75,000.

GAINESVILLE, FLA.—A Michigan syndicate owning 80,000 acres of land in Lafayette County is having surveys made by A. W. Taylor, City, and will erect saw mills and conduct naval stores.

DE LAND, FLA.—The Bond Brick Co. will increase the capacity of its brick works. Machinery has been purchased. F. E. Bond is Mgr.

NEW ORLEANS, LA.—It is reported that B. H. Farren, Pres. B. H. Farren & Co., Wolfe St., Baltimore, Md., is investigating with a view of establishing oyster packing house at New Orleans. If plant is established it will have a daily capacity of from 500 to 3,000 barrels of oysters and represent an investment of $100,000.

NEW ORLEANS, LA.—The Liquid Carbonic Co., of Chicago, will erect in New Orleans a $100,000 plant. F. P. Goebel, local representative of company, is in correspondence for data and plans.

NAPOLEONVILLE, LA.—Napoleonville Ice Factory Co. has increased its capital from $6,000 to $11,000 and will erect a new 10-ton factory.

MOUNT OLIVE, MISS.—Flouring mill and dry kiln of Warren Gee Lumber Co. was destroyed by fire. Loss, $35,000.

CORINTH, MISS.—W. B. Small Chair Co. has been chartered with a capital stock of $35,000. Incorporators: W. E. Small, S. L. Nelson and others.

BRISTOL, TENN.—The Ordway Mfg. Co. has sold a controlling interest in its plant to Ohio capitalists, who will enlarge the factory and extend its business. T. W. Frech, of Cleveland, O., is Mgr.

TULLAHOMA, TENN.—The Tullahoma Fruit Canning & Preserving Co., capital $15,000, has been organized here with James Wiley, Gen. Mgr., to erect a canning factory. W. H. Anthony, F. B. Martin, Doak Aydelott and others are directors.

CHATTANOOGA, TENN.—The Southern Skein & Foundry Co., capital $100,000, has applied for a charter. Incorporators: James K. Jones, John G. Johnson, Gilbert N. Prentiss, Harry S. Probasco and Frank A. Nelson. A plant employing about 250 men will be erected at once in East Lake. The principal business of company will be the manufacture of wagon skeins and other parts of wagons. The Racine (Wis.) Wagon Co. and Chattanooga Wagon Co., City, are interested.

SILVER CREEK, TENN.—E. C. Tillman, J. G. Coggins and Jos. Beatty will establish a pencil factory here.

COVINGTON, KY.—The Licking Rolling Mill Co. will put in a new bar mill at once.

OWENSBORO, KY.—The Owensboro Wagon Co. will erect a 2-story brick factory building, 300 × 400 ft. J. T. Griffith is Pres.

BEDFORD, KY.—J. W. Jackson, it is reported, will add a grist mill to saw mill.

MARION, O.—It is reported that plans are under way for doubling capacity of Susquehanna Silk Mills, at an expenditure of probably $50,000.

DAYTON, O.—The Dayton Gas Light & Coke Co. will probably increase its capital stock to $1,000,000 for the purpose of making extensive additions to its plant.

MUNCIE, IND.—The Diamond Brick Co. has incorporated with a capital of $40,000. The company will establish a plant here. L. M. Glass, E. G. Clark and H. H. Wolf are directors.

EVANSVILLE, IND.—The Indiana Quartered Oak Co. has incorporated with a capital of $15,000. Company will establish a plant to produce lumber, veneering, etc. Chas. E. Maley, Daniel Wertz and Bedna Young, incorporators.

ELKHART, IND.—The Pancost Milling Co. has incorporated with a capital stock of $15,000. Company will establish a milling plant to manufacture flour. W. S. Pancost and C. E. Pancost, incorporators.

TERRE HAUTE, IND.—The Terre Haute Rolling Window Screen Co. has incorporated; capitalized at $25,000. The company will establish a plant here.

TERRE HAUTE, IND.—The Braden Mfg. Co. has incorporated with a capital of $20,000. The company will establish a plant and manufacture architectural iron and tin work. John H. Vielie, W. A. Braden and W. E. Williams incorporators.

MADISON, IND.—The Standard Bracket & Pin Co. has incorporated with $12,000 capital. The company will establish a plant here.

CHICAGO, ILL.—W. W. Dant, of Lebanon, Ky., and associates have incorporated the Smith Distillery Co. with $16,000 capital.

JONESBORO, ARK.—L. Sachs will establish a $20,000 canning factory here, moving a plant from Kirksville, Mo., which he recently purchased.

POCAHONTAS, ARK.—Pocahontas Hoop & Stave Co. has incorporated with $10,000 capital, to erect and operate a woodworking plant, manufacture hoops, staves, etc. Incorporators: Geo. R. Sullinger, T. M. Speice, J. F. Speice and Wilbert Mathile.

KANSAS CITY, MO.—The Silver Laundry Co. will erect a laundry building at a cost of $7,000.

ST. LOUIS, MO.—The March Mfg. Co., capital $100,000, has been chartered here by Wm. F. Hillis, H. A. Peters and Maurice C. Biedermann.

MARLIN, TEX.—The Marlin Ice & Cold Storage Co. has filed an amendment to its charter, increasing its capital stock from $20,000 to $30,000.

HOUSTON, TEX.—Plans and specifications have been received for plant of Otis Elevator Co. and bids will be received for its construction. The plant will cover two blocks of ground and about 100 men will be given employment. Elevators are to be manufactured from raw material.

PAOLI, IND. T.—Fire destroyed the cotton gin of the De Board Gin Co.

SHAWNEE, OKLA.—The Newman Plumbing Co. has been chartered with a capital stock of $20,000. Incorporators: Walter and Lida Newman and Geo. B. Johnson, all of Shawnee.

Information concerning contracts to be let or supplies to be furnished, and corrections of errors and omissions in published items, are invited. Full details regarding the equipment, tools, etc., required for the proposed improvements are specially desired.

SACRAMENTO, CAL.—The California Fruit Canners' Assn. will erect a canning plant on the blocks bounded by F and G, Sixth and Seventh Sts. and will be completed by April 1.

MISCELLANEOUS CONTRACTS.

DRAINAGE.—Manito, Ill.—Drainage of lower part of town is under consideration.

FOUNTAIN.—Somerville, N. J.—Board of Commissioners are to erect a new $12,000 drinking fountain.

DRAINAGE DITCH.—Fort Dodge, Ia.—County Board has been petitioned for large drainage ditch for District No. 5.

DIKE.—Argentine, Kan.—Citizens of this place are advocating construction of dike, one mile long, along south bank of Kaw River.

SUBWAY.—Sacramento, Cal.—Construction of subway under railroad tracks at 12th and B Sts. is reported under consideration.

SUBWAY.—Winnipeg, Man.—Council has ordered Canadian Pacific Ry. to proceed at once with construction of a subway on Rachael St.

MARINE RAILWAY.—San Francisco, Cal.—Southern Pacific Co. is reported to be contemplating building of a marine railway at Oakland Creek.

DOCK.—Anacortes, Wash.—It is reported that Robinson Fisheries, W. F. Robinson, Pres., will soon commence the building of a large dock, 150 by 350 ft.

TELEPHONE SYSTEM EXTENSION.—Fort William, Ont.—By-law to provide $22,500 for improvement and extension of telephone system will be voted on.

TUNNEL.—Mahonoy City, Pa.—Advices from this place state that P. J. O'Neill has been awarded contract to drive 400-ft. tunnel for Reading Coal & Iron Co.

LEVEE.—Dayton, O.—Plans and specifications for levee along west side of Miami River are stated to have been submitted to Board Public Service. Est. cost is $26,800.

STEEL SHED.—Stockton, Cal.—Bids are asked by Geo. S. Wheatley, Clk., until Jan. 9 for construction of freight shed of steel and galvanized iron, cost not to exceed $8,000.

RETAINING WALL.—Toledo, O.—Contract for furnishing material and constructing masonry or concrete retaining wall at Madison Ave. has been let to Louis Montville, at $4,134.

CASTINGS.—New Haven, Conn.—National Steel Foundry Co. is stated to have secured an order to furnish all of the steel castings to be used in the London, England, underground railway.

DRAINAGE WORK.—St. Paul, Minn.—Members of legislature from Red River Valley section are to ask state appropriation of $100,000 for swamp land drainage in their part of the state.

LEVEES.—Bakersfield, Cal.—County Surveyor Buffington has completed surveys of proposed levee to extend from Kern Island Canal to Calloway Weir. Total length is about 2.29 miles, and est. cost is $36,000.

CYPRESS TIES.—Washington, D. C.—Bids are asked by Isthmian Canal Commission until Jan. 25 for furnishing 50,000 hewn red cypress or redwood road ties and 480 hewn red cypress switch ties of various sizes.

SHELLS AND SAND.—National Soldiers' Home, Va.—Bids are asked by B. A. Beeson, Treas., Southern Branch, N. H. D. V. S., National Soldiers' Home, until Jan. 10, for furnishing 8,000 bushels oyster shells and 200 cu. yds. sand.

FIRE ENGINE, ROCK CRUSHER, ETC.—Santa Rosa, Cal.—Bond issue is to be voted on within a month or so to provide funds for purchase, among other things, of new fire engine, rock crusher, etc. L. E. Ricksecker is Cy. Engr.

OIL FIELD DEVELOPMENT.—Carlsbad, N. Mex.—A company is to be formed with $3,000,000 capital to develop and exploit the new oil fields at Carlsbad. Among the stockholders are J. J. Lonegrau and John Koster, of Los Angeles, Cal.

PARK, ETC.—Columbus, O.—Indianola Park Co., of Columbus, has been incorporated with $100,000 capital and proposes to build general public park in Indianola Summit addition, Clinton Township. Eli P. Evans and W. J. Davidson are interested.

BOILER, ETC.—Spring Lake, N. J.—Bids are asked by Borough Engineer until Jan. 10 for furnishing and installing 150-HP. marine type boiler, air compressor, feed-water heater, boiler feed pump, steam separators, etc., in power house. (Advertised, Engineering News.)

DRAINAGE.—Gueydan, La.—Orange Land Co., J. H. Chalkley, Secy., Leavenworth, Kan., is reported to contemplate construction of extensive drainage system for its 265,000 acres of land in this district. Ben. M. Foster, Lake Charles, La., is local representative of the land company.

DRAINAGE WORK.—Pana, Ill.—Bids are asked by Commissioners o Pana and Assumption Drainage District until Jan. 14 for cleaning or dredging about four miles of main ditch, requiring removal of about 26,250 cu. yds. A. B. Alexander, Engr. in Charge, Decatur, Ill. J. A. Foil, Town Clk.

DRAINAGE WORK.—Clinton, Ill.—Bids are asked by Commissioners of Friend's Creek Special Drainage District, Sherman Miller, Pres., until noon, Dec. 30, for construction of considerable drainage work, both open ditch and tile. J. G. Melluish, 222 Unity Bldg., Bloomington, Ill., is Engr.

GRADE CROSSING REMOVAL.—New York, N. Y.—Board of Estimate was to consider at its next meeting the proposal of the New York, New Haven & Hartford and the Harlem River & Portchester Railroads to maintain an elevated structure over 22 streets in the Bronx where grade crossings now exist.

WHARF REBUILDING.—New Orleans, La.—Board of Port Commissioners have directed its engineer, J. F. Coleman, Hennen Bldg., New Orleans, to prepare plans and specifications for rebuilding the Illinois Central fruit wharf. The work will cost $125,000, $60,000 of which is for the wharf and $65,000 for constructing steel sheds.

DITCHES.—Sidney, Ia.—Bids are asked by County Supervisors until Jan. 4 for construction of Mule Slough Improvement Ditch and spur ditches, requiring 122,000 cu. yds. excavation; also for construction of County Improvement Ditch, consisting of 40,000 cu. yds. J. D. McKean, County Audr. (Advertised, Engineering News.)

SUBWAYS.—New York, N. Y.—According to a statement of Alexander E. Orr, Pres. Rapid Transit Commission, four underground lines are to be constructed in the near future. One of these is to be on the east side of Manhattan, one on the west side, a line from Fort Hamilton, running through Fourth Ave., Brooklyn, to the new East River Bridge, and a second line in Brooklyn extending from the vicinity of Prospect Park to the Brownsville District. It is estimated that the subway

work now contemplated for Manhattan alone, the east and west side lines, will cost more than $100,000,000.

MOTORS, CEMENT, SHEARS, ETC.—Washington, D. C.—Bids are asked by Bureau Supplies and Accounts, until Jan. 10, for furnishing at various navy yards a quantity of naval supplies. Among the articles desired are motors, arc lamps, paving blocks, cement, trolley track, chain hoists, forge equipments, wrenches, Hercules shears, blast forges, steel, castings, fire hose, etc. H. T. B. Harris, Paym.-Gen., U. S. N.

PILES.—Washington, D. C.—Bids are asked by Isthmian Canal Commission, J. G. Walker, Chn., until Jan. 24, for delivery at Colon or Port of Ancon, La Boca Pier, at Pacific Terminal of the Canal near Panama, for furnishing 2,000 non-creosoted piles of various lengths, ranging from 40 ft. to 60 ft., and 2,000 creosoted piles of various lengths, ranging from 45 ft. to 80 ft.

TELEPHONE COMPANIES.—Topeka, Kan.—The following concerns have been chartered to do business in Kansas: Beverly Telephone Co., Beverly, capital $3,000; Mutual Telephone Co., Kirwin, $1,500; Blue Rapids Telephone Co., Blue Rapids, $12,000; Riley County Farmers' Telephone Co., Parallel, $2,600; Oxford Mutual Telephone Co., Oxford, $3,000; People's Telephone Co., Bentley, $1,500; Weber Telephone Co., Weber, $5,000.

ARTIFICIAL LAKE.—Princeton, N. J.—A contract has been awarded to the Hudson Engineering & Construction Co., 92 William St., New York, for the construction of an artificial lake about three miles in length at Princeton, N. J., intended chiefly for recreation and aquatic sports by the students of the University. The work will involve the construction of several ornamental bridges and will extend over a considerable time. The funds for the work have been provided through the generosity of Mr. Andrew Carnegie. The engineer in charge of the work is Mr. J. J. R. Croes.

LUMBER.—Washington, D. C.—Following bids were received by Isthmian Canal Commission, Dec. 17, for furnishing yellow pine or Douglas fir lumber for delivery on the Isthmus: Morgan Bros. Co., Seattle, Wash., $81,417, Douglas fir; Charles Este, Philadelphia, Pa., $85,213, yellow pine; Continental Lumber Co., Houston, Tex., no aggregate bid given; C. A. Hooper & Co., San Francisco, Cal., $71,317, Douglas fir; J. J. Moore & Co., San Francisco, Cal., $63,181, Douglas fir; Bellingham Bay Improving Co., San Francisco, Cal., $70,273, Douglas fir; Chicago Lumber & Coal Co., St. Louis, Mo., $93,811, yellow pine; A. M. Cusick, Milwaukee, Wis., $34,534, yellow pine f. o. b. cars Gulf ports; Pope & Talbart, San Francisco, Cal., $71,625, Douglas fir; Johnson & Winsatt, Washington, D. C., $101,176, yellow pine; Pacific Pine Co., San Francisco, Cal., $71,541, yellow pine; Charles Nelson Co., San Francisco, Cal., $63,320, Douglas fir; Hoffman Engineering & Contracting Co., Philadelphia, Pa., $74,170, Douglas fir.

MINING NOTES.

LEASE OF DUMP.—Victor, Colo.—Portland Gold Mining Co., F. M. Kurie, Mgr., Victor, is calling for bids until Dec. 30 for lease of its No. 1 dump.

REDUCTION PLANT.—Corona, Cal.—Advices from this city state that the U. S. Tin Mining Co. is soon to install a copper reduction plant on its Temescal tin mine holdings.

COAL LAND.—Wilkesbarre, Pa.—Fred. H. Gates, Cy. Clk., was to open bids Dec. 28 for the lease of 35 acres of minable coal underlying the "River common." W. V. Ingham is Cy. Engr.

REDUCTION PLANT.—Kingman, Ariz.—Gold Hill Reduction Co., according to reports is to erect a 500-ton reduction plant at this place. C. L. Doron, Los Angeles, Cal., is Mgr. for that section.

STAMP MILL.—Prescott, Ariz.—Local reports state that Charles J. George is to spend considerable money for improvements at the Lincoln mine. Among these will be erection of a 20-stamp quartz mill.

PLASTER MINING.—Grand Rapids, Mich.—Gilbert Witters, Grand Rapids, is stated to be organizing company to have capital of $100,000 to work plaster beds upon the Hilton Farm, on which he has secured an option.

MINING PLANTS.—Florence, Ariz.—Sites have been secured at Cochran Station on which it is stated owners of Columbia Bell and Martinez mine contemplate erecting a concentrating and smelting plant. An aerial tramway is also under consideration. Joseph Champion is Supt.

COPPER MINE DEVELOPMENT.—Globe, Ariz.—Globe & Arizona Development Co., recently organized with capital stock of $600,000, has taken over ten claims, and will have 20 in all. It is proposed to issue stock soon, proceeds of which will be used in developing the property and in the purchase of machinery. T. A. Pascoe and E. B. Grider are interested.

NEW COMPANIES.—New York, N. Y.—Mifflin & Linden Mining Co., of Mineral Point, Wis.; $50,000 capital; Calvert Spensley, Charles W. McIlhon, Wm. A. Jones.—Forest Hill Mining Co., of Camden, N. J.; $250,000; A. S. Ross, Hugh Ferguson, Chas. C. Bedout.—Snake River Mining, Milling & Smelting Co., of Asotin, Wash.; $5,000,000; W. S. Rogers, Asotin.—Pactolus Gold Mining Co., of Cheyenne, Wyo.; $15,000; J. H. House, R. H. Widdicombe and J. H. Waters.—Ashboro Copper Mining Co., of Ashboro, N. C.; $100,000; S. M. Bradley, Morehead, Ky.; W. L. Thurber, Ashboro.

MEXICO.

RAILWAYS.

MICHOACAN.—A definite plan for the exploitation of the Iguaren mine, in the state of Michoacan, owned by the Paris house of Rothschilds and others, is being prepared by Engineer Robellaz. One of the first steps taken, will be the construction of a railway from a point near Patzcuaro to the mine, a distance of about 70 miles. It is expected that this will be commenced very soon, and the exploitation of the mine will follow.

NUEVO LEON.—It is reported that there is little doubt that the Coahuila & Pacific Ry. will be extended from Saltillo to Monterey, and it is probable the road will be built westward from Torreon into the state of Durango. G. P. Myers and W. R. Stratford, of New York, Directors of the road, have lately been in Mexico to consider the construction of the extensions proposed. L. D. Ross, Saltillo, Mex., is Gen. Mgr.

SAN LUIS POTOSI.—It is stated that D. J. Spillane, who is building a railway in the state of San Luis Potosi, from Tancanhuitz to the Dieguito station on the Mexican Central, will purchase passenger and freight cars for service on the road.

LIGHT AND POWER PLANTS.

CITY OF MEXICO.—Major George B. Burbank, of New York, and A. S. Harvey, of Leadville, Colo., Engineers, representing the Americans interested in the project, accompanied by George Stuart Simons, of New York, and William Mackenzie, of San Antonio, Tex., have just finished a thorough examination of Malinatenango Falls, District of Tenancingo, with the view of ascertaining the water power available. Mr. Mackenzie is the owner of the property upon which the waterfalls are situated. It is proposed to develop 24,200 HP. from these falls, and it is said that the engineers will make a favorable report on the feasibility of the project. It is proposed to build transmission lines to the City of Mexico and other places within easy distance of the falls and to transmit the power for use in operating industrial concerns.

CULIACAN, SINALOA.—Concession for an electric lighting plant for this city has been granted and the Culiacan Electric Co. has been organized in San Francisco, Cal., with $300,000 capital stock to take advantage of it. The incorporators include I. Gutte, of Gutte & Frank; F. G. Braue and Sidney Sprout, of San Francisco, the last named being the engineer. Concessions have also been granted for local and long-distance telephone systems throughout the state of Sinaloa and for a electric street railway system in Culiacan and suburban electric roads. It is stated that all equipment and materials will be shipped from San Francisco.

CORALES, CHIAPAS.—The heirs of Andres Solon have sold to a Belgian syndicate the Zoquitleco waterfall, in the state of Chiapas, and a power plant will be established to operate the saw mill at Corales, owned by the syndicate.

JALISCO.—The Electra company which furnishes electric light and power to the city of Guadalajara, and also own the principal lines of street railways in the city, have completed plans for a power plant to be located two kilometers north of the Juanacitlan Falls, to be equipped, if built, with machinery capable of producing 5,000 HP. The company is still fighting for the concession for electric tramway lines in the city of Guadalajara, and if they secure the franchise will build the plant at once, or in case others secure the concession the Electra company will construct the plant and furnish the power if desired. Mariano Schiaffino, of Guadalajara, is the Engr.

JALISCO.—Francisco Laveaga, of Guadalajara, has petitioned the state government of Jalisco for a concession to use the water of the Ayutla River to operate reduction works at the Casa Blanca mines, on the Casa Blanca hacienda in the municipality of Union de Tula. It is proposed to generate electricity for transmission of power.

SALTILLO, COAHUILA.—Gustavo L. Lilliendahl, of Saltillo, has made application to the Mexican Government for a concession to use the water of the Artega River, state of Coahuila, for the purpose of operating an electric power plant. Transmission lines will also be built and the power distributed to different points.

SAN CRISTOBAL, GUERRERO.—John J. Moylan, City of Mexico, is having plans prepared for a large electric power plant which he will construct on the San Cristobal River, near the town of San Cristobal. The power will be used to operate the hoists, drills, etc., of the Poder de Dios mine, which Mr. Moylan owns. A new mill and cyanide plant are to be also erected.

BUILDINGS.

CITY OF MEXICO.—The Italian colony of the City of Mexico is to construct a building for a club house in this city, to be known as The Casino Garabaldi. In addition to the usual departments of a first-class club house, the building will have a concert hall and theater. Ulisse Bassetti, Pres. Italian Chamber of Commerce, City of Mexico, can give information.

WATER-WORKS.

CHIAPAS.—A concession to use the waters of the Chivatito River, state of Chialas, for irrigation has been applied for at the Department of Fomento.

GUADALAJARA.—Manuel Guesta Gallardo, of Guadalajara, is stated to have a plan for utilizing the waters of Kake Chapala for irrigating the lands surrounding it, and will present the matter to the government as soon as his plans are developed. The plan also includes a dam across the Santiago River.

PUEBLA.—Agriculturists of Puebla are to apply to the Department of Fomento for a concession to divert 6,000 liters of water per second from the Marafia River for irrigation purposes.

MANUFACTURING PLANTS.

CITY OF MEXICO.—It is reported that James A. Bolton, of New York, proposes to erect a factory in the City of Mexico for the manufacture of aluminum bottle caps, to supply the entire republic. Mr. Bolton holds the patent right for the bottle caps in Mexico, and proposes to organize a company in New York for the manufacture of the device.

CITY OF MEXICO.—Engineer Manuel Fortuno Arguelles has petitioned Federal Government for a concession for the establishment of a factory of wood mosaics in the republic. The sum of at least $100,000 is to be invested in the plant, and permission to introduce the necessary machinery, free of duty, is requested.

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STEEL I BEAMS, RODS, METAL LATH, WIRE CLOTH.—Brooklyn, N. Y.—W. J. Redmond, 5903 New Utrecht Ave., writes us that he is in the market for 200 tons of steel I beams, 74 tons corrugated steel rods, 440 square feet of metal lath, No. 27 gage, and 11,000 square feet of galvanized steel wire-woven cloth, No. 20 gage, ½-in. mesh.

FLOUR MILL MACHINERY.—Denver, Colo.—The Shwayder Trunk Mfg. Co., S. Shwaeder, asks us for the names of firms manufacturing flour mill machinery.

STEAM SHOVEL.—New York, N. Y.—M. E. Davis, 11 Broadway, advises us that he is in the market for a small traction steam shovel, with ½ to 1 yard capacity dipper.

GRADER, CONTRACTORS' DUMP WAGON, SEWER TRENCH MACHINE.—Denver, Colo.—The Colorado Co., Jas. N. Doyle, 211 Tabor Block, writes for the names of firms manufacturing an elevating grader suitable for work in narrow streets, not over 25 ft. wide; contractors' dump wagon, 1½ to 2 yds. capacity, not as high as the ordinary dump wagons by about a foot, and a sewer trench machine for 8 to 36-in. pipe trenches.

PNEUMATIC TOOLS.—Monroe, La.—The Chicago Engineering & Constructing Co. advises us that it requires pneumatic tools and compressors, etc., for boring and driving drift bolts. The holes are to be from ½ to 1-in. in diameter by 12 to 30-in. deep drifts to fit.

CONCRETE MIXER.—Kjobenhavn V., d.—Scholler & Rothe desire to purchase a concrete mixer maanufactured by Campbell & Marsh.

SABINAS, COAHUILA.—A Las Filipinas, S. A., company has been organized in the City of Mexico for the manufacture of twines, ropes, bags, etc., from the fiber of the ixtle plant. The plant will be located in Sabinas, state of Coahuila, although the main office will be in the City of Mexico. The daily capacity of the factory will be 22,000 lbs. of raw material, and the most modern machinery will be used, part of which was made for and exhibited at the St. Louis Exposition. It is expected the factory will be in operation by the middle of next March. A. Terrsia and A. Carstens are the prime movers in the enterprise.

VERA CRUZ.—The New Orleans Plantation Co., owning a plantation near Salina Cruz, state of Vera Cruz, is developing the property, and as soon as the circumstances warrant it will erect a large sugar mill. H. P. Willows, of New Orleans, La., is Gen. Mgr.

MISCELLANEOUS.

MINING MACHINERY.—Amatlan de Cañas, Tepic.—Walter Warren, owner of Los Saltos mine, in the municipality of Amatlan de Cañas, territory of Tepic, according to reports, is to purchase the machinery for a small stamp mill, with plates and concentrators. The mill will be operated by water power.

STAMP MILL.—Chihuahua.—The stamp mill at the Lluvia de Oro mine, state of Chihuahua, is to be increased in capacity by the addition of ten stamps.

MINING MACHINERY.—Chihuahua.—The Chicago-Mexican Consolidated Mining Co., with offices at 408 Tacoma Bldg., Chicago, Ill., is arranging for a mill to be erected at the mines owned by the company in the Cusihuiriachic district, state of Chihuahua. Platt McDonald is Supt. at the mine.

MONORAIL RAILROAD.—The American syndicate, represented in the City of Mexico by Captain Charles Holt, which recently purchased Mt. Popocatepetl volcano to exploit sulphur deposits in the crater, are said to be preparing plans for the construction of a monorail railroad from the town of Tlamacos to the crater.

SMELTER.—Dedrick.—The Mexican Government has just granted a concession to Col. W. C. Greene, of Cananea, Sonora, for the erection and operation of a large smelter at this place.

CONCENTRATING PLANT.—Santa Barbara, Chihuahua.—Advices from Mexico state that the Torreon Smelter Co is about to have a concentrating plant, of a daily capacity of 75 tons, erected at the San Diego mine, at Santa Barbara, Chihuahua. Col. J. W. Pender is Mgr. at the mine.

REDUCTION PLANT.—Velardeña, Durango.—Cipriano Guerrero, Acting Governor, State of Durango, has granted a concession to an American company for the establishment of a reduction plant in the neighborhood of Velardeña, in the Cuencame district. The capacity of the plant is to be not less than 1,500 tons per day, and the company is authorized to construct wagon roads, railroads, telephone and telegraph lines and such other ways of communication as may be necessary. The contract has been submitted to the state congress for approval, and construction shall commence within four months of the date of the ratification of the concession.

WHARF.—Vera Cruz.—Secretary of Public Communications has made a contract with Luis Marron Velasco and Ramon Miranda y Marron for the construction of a wooden wharf in the port of Vera Cruz, on which to receive and store coal from vessels; spacious warehouses are also to be provided, and construction must commence at once.

FOREIGN CONTRACTS—EXPORT NEWS.

ELECTRIC LIGHTING.—England.—Town Council of Boston is considering borrowing of $100,000 for electric lighting purposes.

ELECTRIC LIGHTING.—England.—Borough Council of Bethnal Green is stated to have definitely decided upon an electric lighting scheme to cost $375,000.

SEWAGE DISPOSAL.—England.—Corporation of Carlisle is considering the borrowing of $325,000 for carrying out a scheme for the disposal of all of the city's sewage.

TRAMWAY.—England.—It is reported that a company proposes to construct a tramway system from Westbourne to Swanage, near Bornemouth, at an estimated cost of $340,000.

REVOLVING PLATFORMS, STEEL RAILS.—Spain.—Tenders will be opened at the offices of the Port Administration of the Port of Valencia, Jan. 14 for steel rails to be used in connection with the improvement works at that port. Tenders will be opened Jan. 16 for the supply of eight revolving platforms.

ELECTRIC RAILWAY.—Switzerland.—A decree has been published granting K. Muller, Ad. Tschan and G. Holliger, of Soleure, a concession for the construction and working of an electric funicular railway from Oberdorf to the top of the Weissenstein. Cost of construction is set at about $138,000.

RAILWAY.—Brazil.—The Central Railway of Southern Brazil has been organized at Portland, Me. The capital stock is $5,000,000. It is proposed to build and operate a railroad from some point on the extreme eastern boundary line of the states of Santa Catarina and Rio Grande do Sul, to Jonville, in the State of Santa Catarina. H. H. Nieman, New York, is Pres. and George F. Gould, Portland, Me., is Treas.

RAILWAY.—Russia.—Surveys are said to have already been begun for the proposed construction of a railway between Tiumen and Omsk. The distance between Tiumen and Omsk is about 398 miles as the crow flies, and it is proposed to carry out the tracings through a perfectly flat country intersected by three rivers, the Plyma, Tobol and Ishim, which will have to be bridged. In this part the rivers are not broad, so that the construction of the bridges will not offer any special engineering difficulties.

STONE CRUSHERS.—France.—The U. S. Consul at Nantes, France, has received an inquiry as to the cost and practical utility of American stone breakers. A breaker that will break stones without making too much dust is desired. At present much of the stone broken in certain French quarries has to be screened, and in Guernsey, Channel Islands, electric blowers are used in connection with the breakers. Manufacturers of stone breakers may address Thomas Sankey, 51 rue Hippolyte de Tocqueville, Cherbourg, France.

HARBOR IMPROVEMENTS.—China.—It has been recommended that tenders be invited for the extensive harbor improvements which it is proposed to make at Shanghai. The estimated cost of the work is $12,000,000. Three moles, of a length of 5,500, 5,200 and 4,000 ft., respectively, are to be built. There is to be a depth of 16 ft. at low water alongside the quay. The moles are to be faced with granite and the head of each mole is to consist of an iron caisson filled with concrete. Eight years will be required for the completion of the improvements.

RAILWAY.—France-Italy.—The French and Italian Governments have finally reached an understanding regarding the projected railway from Nice to Cuneo, and a convention has been signed for the construction of the principal line Nice-Breil-Vievola, and of the branch line from Breil to Vintimille. The length of the French portion of the line Nice-Breil-Foutan to the frontier will be 36 miles and it has lately been rumored that a strategic branch line will be built from Escaréne to Luceram, with a length of 7½ miles. The Italian portion of the line consists of two branches. One starting at the frontier where the French branch terminates, will run to Cuneo via Vievola and St. Delmas de Teude; the second one will run from Breil to Vintimille. The former will have a length of about 37¼ miles and the latter of 14¼ miles.

RAILWAY CONSTRUCTION.—South Australia.—The South Australian Government has accepted the tender of Smith & Dyke, of Adelaide, for the construction of the line from Tailem Bend to Pinaroo. The work includes the construction of 86½ miles of permanent way and 3½ miles of siding, and the maintenance of the same for six months from the date of completion; but a departure from the original specification excepts the station buildings. The rails, signals and weighbridges are not included in the price at which the contract was let, which was $321,230.

A bill is before Parliament to authorize the construction of a line of railway from Grove Hill Station in the Northern Territory to Iron Blow, a distance of 13 miles. The line offers no engineering difficulties, the steepest gradient being 1 in 40 and the sharpest curve has a radius of six chains. The engineer for the proposed company is Mr. James Chapman Lovely, of Adelaide.

INDUSTRIAL NOTES.

OUR READERS are requested to send short notes regarding new contracts that they are about to award, or have secured, for our news columns. Changes in firms' names and addresses are also wanted. "Write-ups" will not be inserted under any circumstances, as notes must contain news of interest to our readers. If our readers are in the market for any kind of machinery, tools, etc., we shall be glad to send them names of responsible firms making what they want.

THE CHICAGO HOUSE WRECKING CO., West 35th and Iron Sts., Chicago, Ill., writes us that it has purchased the entire World's Fair of St. Louis. This purchase means that the company has come into possession of millions of dollars worth of goods, the main articles for sale being advertised on our For Sale pages.

THE HENRY S. SPACKMAN ENGINEERING CO., of Philadelphia, Pa., formerly Lathbury & Spackman, Inc., has removed its offices and laboratories to 42 North 16th St. This move was necessitated by its increasing business both in the engineering and testing lines. Its laboratories and engineering department have been completely re-equipped.

THE CONTRACTORS & RAILWAY SUPPLY CO., of Pittsburg, Pa., advises us that it has opened an office in the Ellicott Square Bldg., Buffalo, N. Y., for the purpose of caring for the New York and Canadian trade. The company is ready to contract with manufacturers of contractors' and railway equipment for the sale of their machinery in this territory.

THE ALLIS-CHALMERS Co., New England offices, Boston, Mass., which are now in the Board of Trade Building, and the offices of its Electrical Department, The Bullock Electric Mfg. Co., in the Journal Building, will be consolidated on Dec. 1, and removed to the State Mutual Building, 50 Congress St. Mr. George H. Berg will be the manager in charge of the consolidated offices.

THE EXETER MACHINE WORKS, 26 Cortlandt St., New York, have recently closed a contract with the N. Y. Central & Hudson River R. R. Co. for all its coal and ash handling machinery at its Port Morris and Yonkers power plants. They also have the contract from the Nassau Light & Power Co. for coal handling machinery, and in addition are installing the Exeter Le Grand gravity system in the Park Shops power house of the Pennsylvania Railroad Co., Philadelphia.

W. D. BIGGERS, of St. Louis, Mo., who, for the past 2½ years, has been connected with the Zelnicker Supply Co., and previous to that time, for nearly 20 years, with the Simmons Hardware Co., of St. Louis, as buyer and manager of its Wholesale City Sales Department, has embarked in business for himself in the Security Bldg., acting as manufacturers' agent, selling to jobbers and railroads. Mr. Biggers will give his personal attention to all of the accounts that he will represent; he will make a specialty of hardware and railway supplies.

THE NASHVILLE ROOFING & PAVING CO., Birmingham, Ala., during the years 1903-1904 has constructed in the City of Birmingham 32,546 sq. yds. of bitulithic pavement, which has proved so satisfactory to the citizens that in accordance with the petition of the taxpayers on Highland Ave., one of the leading resident streets of the city, a contract was awarded to the Nashville Roofing & Paving Co., on Dec. 8, for paving this street, amounting to 50,000 sq. yds., with bitulithic, on the construction of which work will commence immediately.

THE DAVENPORT LOCOMOTIVE WORKS, Davenport, Ia., informs us that the Union Terminal Railroad of St. Joseph, Mo., has just placed an order with them to build a six-wheel connected switching locomotive. Cylinders 19 × 24, weight 120,000 lbs. on all drivers, boilers to be 62 ins. in diameter and constructed for 200 lbs. working pressure. Special equipment consists of Westinghouse air brakes, Leach air sander, Gollmer bell ringers, Little Giant pneumatic blow-off cocks, Crosby safety valves, McConway & Torley couplers, Monitor injectors, Nathan lubricators, Jerome metallic packing. Tender which is to be built entirely of steel is to be equipped with Bettendorf steel bolsters and Bettendorf steel trucks. The locomotive is to be delivered in February.

THE WILLIAMS ELECTRIC MACHINE CO., of Akron, O., has entered into the electrical manufacturing field. This company is placing on the market a line of electric clutches and electric stopping or safety devices to be used in stopping machinery in case of accident to the operator. These clutches, etc., are the invention of Mr. H. A. Williams, who is the general manager of the company. This concern is also placing on the market a line of electrical apparatus both alternating and direct current generators, motors, controllers, switchboards, etc., and will also undertake the installation of complete transmission plants, embracing clutches, safety devices, generators, engines, motors, switchboards, line shafting and hangers, pulleys, etc., making a specialty of equipping plants complete all ready for operation.

THE CROCKER-WHEELER CO., through their Pacific Coast managers, the Abner Doble Co., of San Francisco, Cal., has secured a contract from the California Gas & Electric Corporation for three 4,000-KW., 25-cycle, three-phase, 13,200-volt Crocker-Wheeler type alternators. These machines will furnish current to operate the United Railroads of San Francisco, in accordance with a contract recently secured by the California Gas & Electric Corporation. They will be direct-connected to Snow gas engines, the largest in the world for such service. The generators are to be of the revolving-field type of machine recently brought out by the Crocker-Wheeler Co., and the securing of the contract indicates that the important position this company has held in the direct-current field is also to be maintained in the alternating line. The generators are to operate at 88 revolutions. The installation of these three engine-driven generating units in San Francisco will mark an important step for the transmission company, as they will operate in parallel with the water power plants of the company, and thus serve as an important reserve plant for the entire system. One of the units will be used exclusively for handling the peak load on the railway lines.

THE WESTINGHOUSE ELECTRIC & MANUFACTURING CO., through their agents, Messrs. G. & O. Braniff & Co., of Mexico, has been awarded the contract for all the electrical apparatus to be installed at the El Oro Mining and Railway Co., El Oro, Mexico. This contract amounts to nearly $100,000.

The Canadian Westinghouse Co., Limited, has sold to the Hamilton Cataract, Power, Light & Traction Co. for use in its Victoria substation at Hamilton, Ont., 2 motor-generator sets, each consisting of a synchronous motor and a direct current generator. The motor-generator sets will be of the two-bearing type, the generators delivering direct current at 550 volts to the railway system, and each being rated at 750 KW. The synchronous motors will take two-phase current at 8,000 alternations and 2,400 volts, and will be rated at 1,380 HP. The excess of capacity in the motors is provided so that they may be used for raising the power factor of the transmission system. Power is taken through lowering transformers from the high tension transmission line from the De Cew Falls station of the company. These motor-generator sets will be built at the works of the Westinghouse Electric & Manufacturing Co., at East Pittsburg, Pa.

THE ELECTRIC CONTROLLER & SUPPLY CO., of Cleveland, O., has just shipped the second of two 200-HP. 220-volt type M. T. Magnetic Switch Controllers to the Lorain plant of the National Tube Co. They are for the control of the reversing motors driving the tilting tables on each side of the plate mill. These controllers give automatic acceleration, which can be adjusted to the maximum rate consistent with safety to motors and gearing. When reversing from full-speed forward to full-speed reverse the table is automatically brought to a quick stop and accelerated in reverse direction in the least time interval consistent with safety. The magnetic controller with resistance is placed near the motor thereby effecting economy in the use of heavy wire. The operating controller consisting of a small master switch, is conveniently mounted on the roller's pulpit, and since the contacts of this controller carry only very light current, it may be operated with exceptional ease. The construction of the magnetic controller, however, is such that no matter how rapidly the operating controller may be reversed, the current flowing to the motor is automatically limited to a safe value. The M. T. Controller is especially adapted to the control of motors of any horse-power, driving machinery which must be quickly accelerated, but which has such heavy parts that with the ordinary manually operated controller dangerous overloads, with consequent damage to motor and gearing are sure to occur. This is especially true of machinery which must be quickly reversed. Other recent shipments of controllers of this type have been made to The Carnegie Steel Co. and to The Lackawanna Steel Co. also to the Illinois Steel Co.

THE COFFIN VALVE CO., of Boston, Mass., has found it necessary to increase the capacity of its plant. The business of the past year, 1904, has been found to amount to six times that of 1896, which gives some idea of the magnitude to which its business has grown. A large addition was commenced early in November, and will be ready for occupancy the first of January, 1905. The new building has twice the capacity of the present plant, is built of wood, and is designed with side galleries for the lighter machines. A large number of machine tools, such as planers, lathes, boring machines and drills will be installed in the near future. The new system will be electrically operated and all of the new tools will be equipped with independent motor drive, using direct current. All of the machines in the original plant will be equipped with motors as fast as conditions will permit. All motors and generators will be furnished by the Northern Electrical Mfg. Co., of Madison, Wis. The company intends to specialize in gate and sluice valves for water, especially in valves of immense size and magnitude. Among the orders on hand at this time are 7-8 × 12-ft. sluice gates for the City of Boston; 2 circular sluice gates, 12½ ft. in diameter for the Allis-Chalmers Co., and 5-8 × 12-ft. sluice gates for the U. S. Government in the new irrigation systems in the west. Both gate and sluice valves electrically controlled is a feature that has received much attention the past two years. The electrical installations of the past year have met with eminent success and are regarded as being the most up-to-date on the market. A new gate valve catalogue consisting of 100 pages of interesting material will be ready for delivery February 1st. The company considers the outlook for its business the coming year the most promising in its history.

THE ABNER DOBLE CO., San Francisco, Cal., Engineers, established 1850, has recently closed a contract with the Napa City Water Co. for furnishing and erecting their new steel standpipe. This standpipe will be 25 ft. in diameter and 100 ft. high and is to have a 30-in. balcony around the top with an ornamental iron railing. The metal of which this standpipe will be constructed is to have tensile strength of 55,000 to 65,000 lbs. per sq. in., an elongation of 25% and a reduction of area of at least 50%. The metal must also stand cold and quench bending tests, 180 degrees flat on itself without showing any signs of fracture. Shipment is to begin in 90 days and the work of erection is to be completed within 90 days thereafter. The company has been awarded the Grand Prize for its exhibit of a 170-HP. tangential water-wheel. This is the highest award given by the experts at the St. Louis World's Fair. The wheel develops 170 HP. at a speed of 700 revolutions per minute with a water pressure of 300 lbs. per sq. in., equivalent to a hydraulic head of nearly 700 ft. It is direct connected to a 100-KW. railway generator and is one of the units of the intramural power plant. The wheel is of the tangential type with the Doble patented ellipsoidal buckets and is provided with a Doble patented needle regulating nozzle, operated by a governor. The sides of the wheel housing are made of plate glass so that the action of the water on the wheel can be observed. The quantity of water delivered to the wheel is measured by a venturi meter with automatic recording instruments and the pressure of the water is registered by a recording gage. The electrical output is measured by the switchboard instruments. A brief illustrated description of this exhibit appeared in some of the technical papers last October.

CONTRACT PRICES.

[Where (*) precedes items under Contract Prices the work was advertised in Engineering News.]

*IRRIGATION DITCHES, ETC.—Hazen, Nev.—Bids were received at office U. S. Reclamation Service, Hazen, Dec. 15 for construction of lateral ditches with structures and Carson River old channel canal. Bids were taken on six divisions, the following parties submitting bids on two or less divisions:: Division 4, Pacific Coast Construction Co., Portland, Ore., $77,704; Division 5, Pacific Coast Construction Co., $43,550; W. F. Beard & Co., Modesto, Cal., $48,890, Knowlton-Bollen Construction Co., Fort Collins, Colo., $49,375; Division 6, D. E. Brown, Rialto Bldg., San Francisco, Cal., $54,608. Two parties submitted proposals on five or more divisions, their itemized bids being as follows; (1)San Francisco Construction Co., 26 Montgomery, San Francisco, Cal.; (2) Utah Construction Co., Ogden, Utah::

	(1)	(2)
Division 1.		
Excavation, class 1, 150,000 cu. yds.	.13⅝	.15
" " 2, ——— "	.45	.35
Overhaul 1,000 cu. yds.	.01½	.02
Turn-outs, concrete, 105 cu. yds.	10.50	12.00
" cast iron, 2,100 lbs.	.08½	.09
" lumber, 29,000 ft. B. M.	45.00	42.00
Paving 1,500 sq. yds.	1.50	.50
Puddling 200 cu. yds.	2.00	.60
23 bridges, cl. lumber, 14,500 ft. B. M.	65.00	50.00
" com. " 28,000 " "	45.00	42.00
" concrete, 50 cu. yds.	10.50	12.00
Totals	$28,229	$28,558
Division 2.		
Excavation, class 1, 300,000 cu. yds.	.13½	.13⅝
" " 2, ——— "	.45	.35
Overhaul 4,000 cu. yds.	.01½	.02
73 turn-outs, concrete, 350 cu. yds.	10.50	12.00
" cast iron, 5,200 lbs.	.08½	.09
" lumber, 52,000 ft. B. M.	45.00	42.00
Paving 3,200 sq. yds.	1.50	.50
Puddling 260 cu. yds.	2.00	.60
29 bridges, cl. lumber, 20,000 ft. B. M.	65.00	50.00
" com. " 38,000 " "	45.00	42.00
" concrete, 70 cu. yds.	10.50	12.00
Totals	$56,082	$58,624
Division 3.		
Excavation, class 1, 250,000 cu. yds.	.13½	.14
" " 2, ——— "	.45	.35
" " 3, ——— "	.75	.50
" " 4, ——— "	1.00	1.25
Overhaul 3,000 cu. yds.	.01½	.02
91 turn-outs, concrete, 208 cu. yds.	10.50	12.00
" cast iron, 4,200 lbs.	.08½	.08⅝
" lumber, 72,000 ft. B. M.	45.00	40.00
Paving 3,400 sq. yds.	1.50	.50
Puddling 380 cu. yds.	2.00	.60
30 bridges, cl. lumber, 19,000 ft. B. M.	65.00	50.00
" com. " 39,000 " "	45.00	40.00
" concrete 72 cu. yds.	10.50	12.00
Totals	$49,182	$46,095
Division 4.		
Excavation, class 1, 400,000 cu. yds.	.13⅝	.14
" " 2, ——— "	.45	.35
" " 3, ——— "	.75	.50
" " 4, ——— "	1.00	1.25
Overhaul 10,000 cu. yds.	.01½	.02
100 turn-outs, concrete, 260 cu. yds.	10.50	12.00
" cast iron, 5,200 lbs.	.08½	.08⅝
" lumber, 77,000 ft. B. M.	45.00	40.00
Paving 4,000 sq. yds.	1.50	.50
Puddling 400 cu. yds.	2.00	.60
58 bridges, cl. lumber, 36,000 ft. B. M.	65.00	50.00
" com. " 77,000 " "	45.00	40.00
" concrete 140 cu. yds.	10.50	12.00
Totals	$74,862	$71,642
Division 5.		
Excavation, class 1, 290,000 cu. yds.	.15½	.16
" " 2, ——— "	.40	.35
Overhaul 5,000 cu. yds.	.01½	.02
Totals	$45,025	$46,500
Division 6.		
Excavation, class 1, 3,000 cu. yds.	.15	.....
" " 2, ——— "	.50	.....
" in trench, 1,000 "	.35	.....
Back-filling 2,000 "	.20	.....
Puddling 1,000 "	2.00	.....
Paving 600 sq. yds.	2.00	.....
Concrete 3,260 cu. yds.	12.00	.....
Cast iron, 7,400 lbs.	.09	.....
Steel I-beams, 8,800 lbs.	.09	.....
1½ G. p. railing in place, 68 feet.	.40	.....
Cl. o. p. lumber, 4,060 ft. B. M.	68.00	.....
Total	$45,277	.....

*TUNNEL.—Boston, Mass.—Following bids were received by Boston Transit Commission Dec. 15 for constructing Section 3 of the Washington St. tunnel: (1) Manufacturers' Contracting Co., 1005 Market St., Wilmington, Del.; (2) Patrick McGovern, 6 Beacon St., Boston, Mass.; (3) Charles F. Taylor & Co., 23 Lewis St., East Boston, Mass.; (4) Coleman Bros., 15 Court Sq., Boston, Mass.; (5) Gow & Palmer, 50 Congress St., Boston, Mass.; (6) H. P. Nawn, 82 Savin St., Boston, Mass.; (7) Jones & Meehan, 1 Beacon St., Boston, Mass. (awarded contract):

BIDS RECEIVED DECEMBER 15, 1904, BY BOSTON TRANSIT COMMISSION, FOR CONSTRUCTING SECTION 3 OF WASHINGTON STREET TUNNEL.

Items.	(1)	(2)	(3)	(4)	(5)	(6)	(7)
21,000 cu. yds. earth excavation	$3.60	$3.75	$3.00	$3.35	$3.00	$3.50	$3.05
Excavating for and laying 170 lin. ft. 24-in. sewer, open cut	9.50	9.00	20.00	12.00	8.50	5.00	8.00
" " " tunnel	9.50	10.00	20.00	7.00	6.50	5.00	6.30
Excavating for and laying 400 lin. ft. 18-in. sewer, open cut	9.50	11.00	15.00	10.00	7.00	5.00	8.00
" " " tunnel	9.50	12.00	15.00	7.00	6.50	5.00	6.30
3,000 cu. yds. concrete for all purposes except roof	9.25	10.50	10.00	9.50	10.00	9.00	9.00
900 cu. yds. concrete for roof	10.50	12.50	11.00	10.00	12.00	11.00	10.00
80 cu. yds. brick masonry for manholes, piers for water pipes, etc	16.00	14.00	15.00	17.00	18.00	15.00	20.00
Laying 450 lin. ft. 24-in. vitrified pipe, side of or above tunnel walls	1.00	1.50	1.50	.75	1.00	1.00	1.00
Laying 36 lin. ft. 24-in. cast iron pipe for sewer	3.00	2.00	3.00	1.50	2.00	4.00	2.00
Laying 100 lin. ft. 6-in. vitrified pipe	.20	.25	.50	.50	.30	.50	.50
Laying 350 lin. ft. 4-in. vitrified pipe	.10	.25	.40	.25	.20	.40	.40
Setting and securing 20 tons steel weighing less than 6 lbs. per lin. ft.	12.00	12.00	20.00	15.00	15.00	10.00	10.00
Setting and securing 500 tons steel weighing 6 lbs. or more per lin. ft.	14.00	7.00	15.00	7.00	10.00	6.00	12.00
1,500 sq. yds. coating of Portland cement mortar	.45	.40	.50	.50	.30	.60	.50
10 cu. yds. of grout	25.00	20.00	20.00	26.00	20.00	25.00	25.00
5,100 sq. yds. waterproof coating of asphalt	.40	.20	.40	.25	.30	.40	.50
9,000 sq. yds. tarred felt, pitch, etc.	.20	.20	.30	.15	.25	.15	.20
Underpinning and supporting and protecting buildings and structures and all other work, risks, etc.	28,000.00	18,000.00	23,000.00	15,000.00	15,000.00	11,000.00	12,000.00
Totals (sewer by open cut)	$160,113	$154,769	$151,063	$138,204	$134,837	$133,974	$129,672
Totals (sewer by tunneling)	160,113	155,339	151,063	136 154	134,297	133,974	128,103

*DAM AND LOCK.—Boston, Mass.—The following bids were received by the Charles River Basin Commission Dec. 20 for building the Charles River dam and lock; (1) Charles F. Taylor & Co., 23 Lewis St., East Boston, Mass.; (2) Holbrook, Cabot & Rollins Corp., Boston, Mass.; (3) Nawn & Brock, Boston, Mass.; (4) Lawler Bros., Charlestown, Mass.; (5) Manufacturers' Contracting Co., 1005 Market St., Wilmington, Del.; (6) Coleman Bros., Everett, Mass.; (7) Metropolitan Contracting Co., Boston, Mass.; (8) Ruggles & Perkins, Boston, Mass.; (9) Patrick McGovern, Boston, Mass.; (10) Jones & Meehan, Boston, Mass.; (11) Dravo Contracting Co., Pittsburg, Pa.:

BIDS RECEIVED AT BOSTON, MASS., DEC. 20, 1904, BY CHARLES RIVER COMMISSION, FOR BUILDING CHARLES RIVER DAM AND LOCK.

Items and quantities.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Coffer-dam at Boston end of dam	$75,000	$70,000	$63,000	$83,000	$37,000	$105,000	$89,000	$92,000	$95,000	$147,000	$123,500
Coffer-dam at Cambridge end of dam	35,000	27,000	35,000	33,000	119,000	40,000	45,000	43,000	45,000	50,000	45,000
Earth excavation, class A (at and near dam)..100,000 cu. yds.	.35	.34	.39	.36	.33	.45	.34	.40	.35	.40	.42
" " B (in Broad Canal)..75,000 cu. yds.	.42	.41	.46	.43	.35	.43	.41	.40	.40	.45	.46
" " C (in Lechmere Ca'l & Ba'n).165,000 cu. yds.	.34	.38	.43	.40	.35	.42	.38	.40	.40	.45	.46
" " D (additional ord. earth)....180,000 cu. yds.	.31	.34	.39	.36	.35	.35	.34	.40	.35	.40	.42
" " E (additional clean earth)....50,000 cu. yds.	.38	.40	.45	.42	.40	.35	.40	.45	.40	.45	.46
" " F (additional sand & gravel).160,000 cu. yds.	.41	.45	.50	.47	.50	.55	.45	.50	.50	.50	.65
Rock excavation.....50 cu. yds.	6.00	5.00	5.00	20.00	5.00	5.00	10.00	10.00	1.00	8.00	3.00
Coarse gravel.....7,000 cu. yds.	.70	.75	.75	.80	1.14	.80	.75	.75	.90	.75	1.70
Broken stone or screened.....5,700 cu. yds.	1.25	1.50	2.00	1.00	1.44	1.50	1.10	1.25	.90	2.00	1.70
Riprap of small stones.....4,600 tons	1.50	1.50	2.00	1.50	1.55	1.25	1.25	1.20	2.25	1.50	2.00
Riprap of medium stones.....3,700 tons	2.00	1.50	2.00	1.50	1.55	1.50	1.25	1.20	2.25	1.50	2.00
Riprap of large stones.....1,400 tons	2.50	1.50	2.00	1.50	1.55	2.00	1.25	1.40	2.50	1.50	2.00
Round piles in place in shut-off dam, class A (45 ft. or less).....12,000 lin. ft.	.16	.24	.20	.20	.25¼	.23	.30	.30	.25	.40	.35
Round piles in place in shut-off dam, class B (over 45 ft.).6,500 lin.ft.	.19	.30	.20	.25	.26	.30	.30	.35	.25	.45	.35
Long leaf yellow pine lumber in place in shut-off dam and in splines.....235 M. ft. B.M.	35.00	60.00	47.00	40.00	47.00	55.00	37.00	55.00	60.00	45.00	70.00
Spruce lumber in place in shut-off dam.....330 M. ft. B.M.	30.00	46.00	40.00	40.00	40.50	45.00	30.00	38.00	58.00	35.00	70.00
Wrought iron and steel in place in shut-off dam.....45,000 lbs.	.06	.06	.05	.07	.041	.06	.05	.05	.06	.06	.07
Cast iron and cast steel in place in shut-off dam.....17,000 lbs.	.04	.03	.08	.06	.04	.05	.03	.08	.10	.04	.07
Round piles in place in foundations, class C (under lock).....140,000 lin. ft	.16	.14	.10	.11	.12	.15	.18	.16	.16	.20	.25
Round piles in place in foundations, class D (45 ft. or less).....240,000 lin. ft.	.17	.15	.12	.13	.13	.16	.20	.15	.16	.20	.22
Round piles in place in foundations, class E (over 45 ft.).70,000 lin.ft.	.18	.18	.17	.20	.15	.20	.20	.20	.22	.25	.22
Driving round piles at incline (additional price).....75,000 lin. ft.	.05	.02	.02	.02	.042	.03	.02	.05	.02	.02	.07½
Spruce lumber in place in sheet piling.....165 M. ft. B.M.	32.00	50.00	45.00	40.00	40.00	46.00	40.00	45.00	55.00	40.00	77.00
Spruce lumber in place in timber platforms.....45 M. ft. B.M.	30.00	35.00	35.00	50.00	29.00	50.00	30.00	35.00	50.00	30.00	60.00
Concrete masonry, 1:2:4.....1,200 cu. yds.	5.50	6.50	6.00	6.00	5.75	5.50	7.00	6.10	7.00	7.50	8.50
" 1:2½:5.....7,000 cu. yds.	5.00	6.00	5.50	8.00	5.50	4.95	6.25	5.70	6.75	7.00	7.75
" 1:3:6.....32,700 cu. yds.	4.25	4.50	5.25	5.00	5.40	4.45	5.80	5.40	6.00	6.50	7.00
" 1:5:9.....100 cu. yds.	4.25	5.00	4.50	5.00	4.50	4.25	5.50	5.00	6.00	6.00	6.00
Granolithic surfacing.....1,800 sq. yds.	1.00	1.00	.20	1.00	.45	.85	1.00	1.80	1.50	2.00	.75
Ashlar masonry, except for copings.....2,060 cu. yds.	15.00	18.00	12.50	15.00	16.75	16.00	16.00	15.00	16.00	16.00	23.00
" for copings.....650 cu. yds.	25.00	20.25	20.00	18.00	20.00	20.00	18.00	20.00	20.00	18.00	26.00
Dimension stone masonry.....115 cu. yds.	35.00	30.00	35.00	40.00	35.00	40.00	35.00	30.00	40.00	30.00	45.00
Face dressing of pointed work.....18,000 sq. ft.	.25	.50	.50	.45	.48	.50	.45	.45	.50	.45	.60
" 6-cut work.....2,000 sq. ft.	.40	.80	.75	.80	.81	.85	.75	.65	.75	.75	1.00
Brick masonry.....10 cu. yds.	18.00	20.00	15.00	15.00	14.00	20.00	25.00	14.00	20.00	16.00	30.00
Iron and other metal work.....500 tons	15.00	25.00	15.00	30.00	12.00	15.00	14.00	10.00	10.00	12.00	15.00
Timber attached to masonry.....15 M. ft. B. M.	20.00	30.00	20.00	40.00	17.50	20.00	25.00	10.00	20.00	30.00	50.00
Furnish and lay 8-in. vit. pipe in masonry for drains.....700 lin. ft.	.25	.50	.50	1.00	.30	.40	.50	.50	.50	.50	.20
" 10-in. " " .....300 lin. ft.	.35	.60	.60	1.25	.40	.50	.60	.60	.75	.60	.20
" 4-in. " " ducts....4,000 lin. ft.	.10	.15	.20	.50	.10	.20	.25	.30	.20	.30	.15
Totals.....	$761,900	$801,607	$828,945	$844,570	$860,515	$869,286	$873,950	$881,705	$922,230	$1,028,080	$1,126,530

AIR CONDENSERS.—Frédéric Fouché, 38 Rue des Ecluses Saint-Martin, Paris, France. Paper; 8½ x 10½ ins.; pp. 28.

The Fouché air condenser has been described in Engineering News on one or two occasions in the past. It was originally exhibited at the Paris Exposition of 1900, and condensers of the Fouché type were installed at Kalgoorlie, West Australia, where water is scarce. The pamphlet shows some commercial types and gives lists of users.

INJECTOR SAND BLAST APPARATUS.—C. Drucklieb, New York City. Pamphlet; 6 x 9 ins.; pp. 4; illustrated.

This pamphlet illustrates and describes a new sand blast apparatus for removing scale from castings and steel structures, and for cleaning stone and brick work. The injector principle on which the apparatus works is claimed to give it unusually high efficiency.

ELECTRIC SHOP EQUIPMENT.—Crocker-Wheeler Co., Ampere, N. J. Paper; 7½ x 10 ins.; pp. 24; illustrated.

This is a reprint of an article on the new locomotive and car shops of the Lake Shore & Michigan Southern Ry. at Collinwood, O., which are equipped with the Crocker-Wheeler generators, motors and multiple-voltage system of speed control.

MACHINE TOOLS.—Niles-Bement-Pond Co., 136 Liberty St., New York. Paper; 6 x 3¾ ins.; pp. 24; illustrated.

This is a short, almost a sample, catalogue of the machine tool productions of this company. As these productions cover practically the entire range of power tools, from bench lathes to steam hammers, it will be understood that only a few specimens are illustrated in these pages.

TRADE PUBLICATIONS.

(The standard sizes for pamphlets and trade catalogues recommended by all the principal engineering societies of the United States are: 3½ x 6 ins., 6 x 9 ins., and 9 x 12 ins.)

FLUE WELDERS.—Joseph T. Ryerson & Son, Chicago, Ill. Paper; 6 x 3½ ins.; illustrated.

The Ferguson flue welder, which has pneumatic pressure on the upper roller, is described here in attractive form after an introductory verse which gives the title to the pamphlet, "The Path the Calf Made."

DEEP-WELL STEAM HEADS.—Laidlaw-Dunn-Gordon Co., Cincinnati, O. Paper; 6 x 9 ins.; pp. 4; illustrated.

A special head has been designed for use where the pump cylinder must be placed far below the steam cylinder and where a somewhat cheaper head than this company's standard is desired. The head is thus briefly described in the circular:

The steam-valve gear is extremely simple. A rocker arm pivoted to one of the webs of the housing is oscillated by a contact roller mounted upon a cross-head on the piston rod. The oscillations take place just before the piston reaches the end of its upward and downward strokes and impart semi-rotary motion to the valve rod controlling the admission and exhaust of the steam. The steam ports are provided with choke valves to equalize the speed of the engine on the up and down strokes, while the top displacement plungers are made of such size that the proper ratio exists between the areas of their cross-sections and the areas of the bottom plungers to equalize the work done on the up and down strokes.

PUMPING MACHINERY.—Fairbanks, Morse & Co., Chicago, Ill. Paper; 6 x 9 ins.; pp. 88; illustrated.

Descriptions of various kinds of steam and power pumps are given, accompanied by illustrations. A feature of the catalogue is the use of sectional drawings of pumps, with direction lines leading from the various parts to sketches of those parts. The sketches are numbered and on the opposite page of the text the names of the parts are given. In the back of the pamphlet useful tables are given.

ELECTRICAL APPARATUS.—General Electric Co., Schenectady, N. Y. Paper; 8 x 10½ ins.; illustrated.

A number of new "bulletins" have recently been issued in the regular G. E. form and forming part of the regular series. They include the following: 4381, on A-C. Switchboards for Small Plants; 4382, describing Thomson Inclined-Coil Portable Indicating Instruments, and showing the scales available; 4384, similarly for Horizontal Edgewise Switchboard Instruments, including also indicating wattmeters, frequency and power-factor indicators; 4385, on Knife-Switches for Switchboard use; 4386, on Accessories to Automatic Circuit Breakers; 4388, on Recording Voltmeters, Ammeters and Wattmeters; 4389, describing the transmission plant of the Washington Water Power Co. at Spokane, Wash.

With these bulletins a number of smaller flyers, price-lists, etc., have been issued, describing details such as insulating joints for gas piping, festoons of miniature lamps, cast-iron flange shaft couplings, heat-resisting inner globes for enclosed arc lamps, etc.

TURBINE-DRIVEN BLOWERS.—De Laval Steam Turbine Co., Trenton, N. J. Paper; 6 x 9¼ ins.; pp 4; illustrated.

Blowers for direct connection to De Laval steam turbines are made for all pressures from 5 to 21 ins. of water, and in capacities from 7 to 300 HP.

MACHINE TOOLS.—Pratt & Whitney Co., Hartford, Conn. Paper; 6 x 3¼ ins.; pp. 48; illustrated.

Under the title of "New Designs," this neat pamphlet shows many of the more recent productions of the Pratt & Whitney Co., including bench and tool makers' lathes, turret lathes, thread-milling machines, tube-drilling machines, rifling machines, etc., etc.

DRAFTSMEN'S INSTRUMENTS.—F. Weber & Co., 1125 Chestnut St., Philadelphia, Pa. Paper; 3½ x 5¼ ins.; pp. 12, and folders; illustrated.

The merits of Riefler's drawing instruments are explained, and three new devices are shown: one a plumb-bob adjuster, another a fountain drawing-pen, and a third a new form of automatic dotting pen.

GRAPHITE.—Joseph Dixon Crucible Co., Jersey City, N. J. Paper; 9 x 12 ins.; pp. 20; illustrated.

This is the September number, "Graphite" being a sort of periodical publication. Many points on paints given here will interest the engineer. Views of various structures, with their painting records, are given, with the object, of course, of showing the superiority of Silica-Graphite paint.

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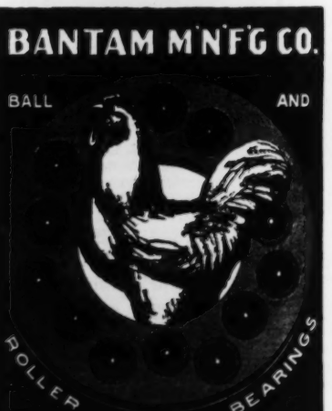

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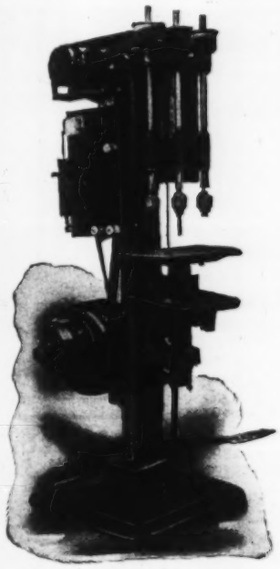

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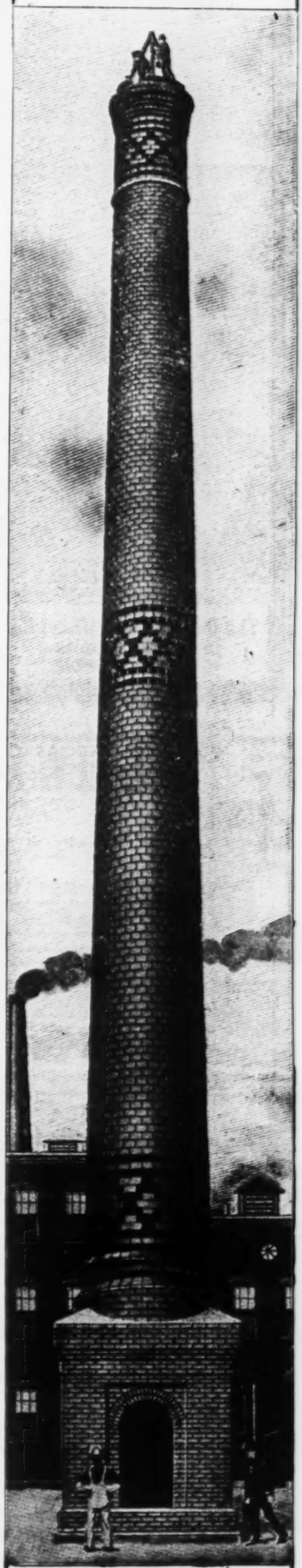

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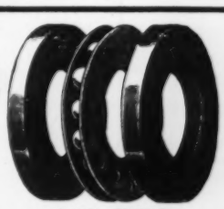

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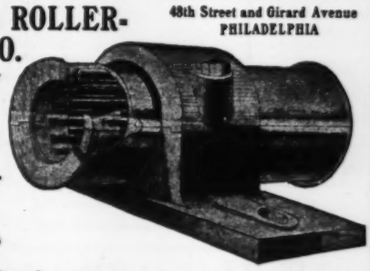

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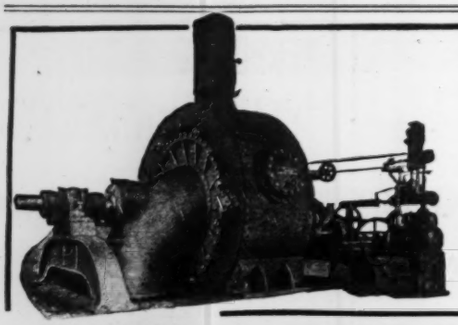

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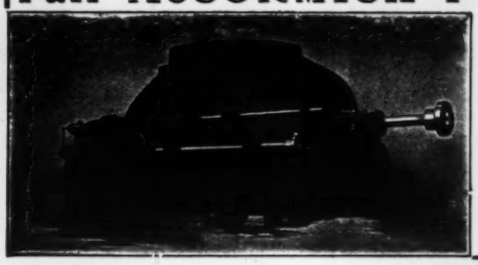

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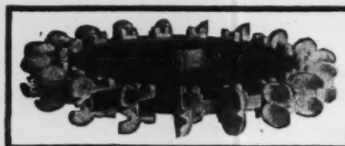

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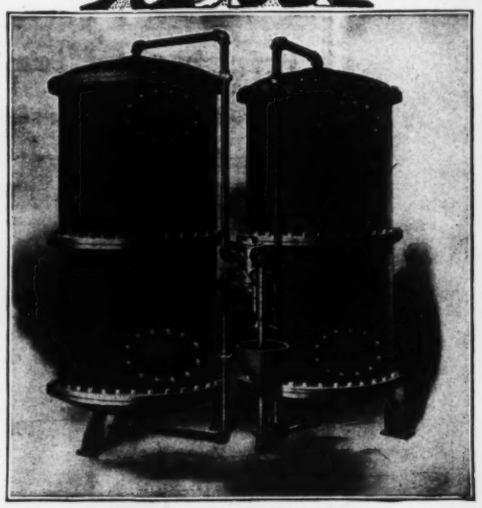

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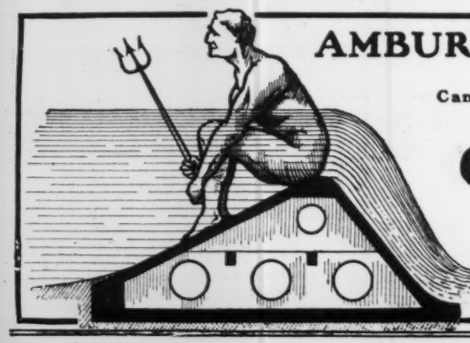

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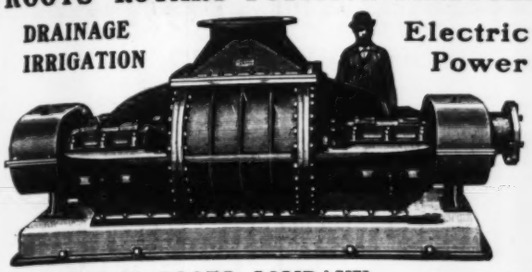

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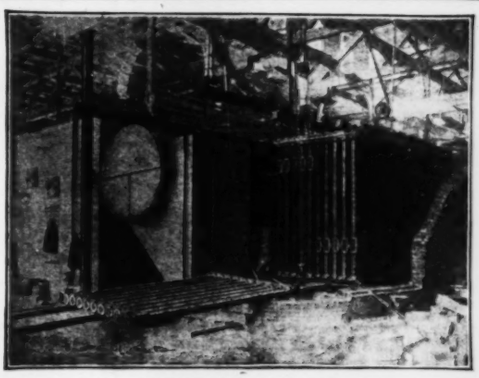

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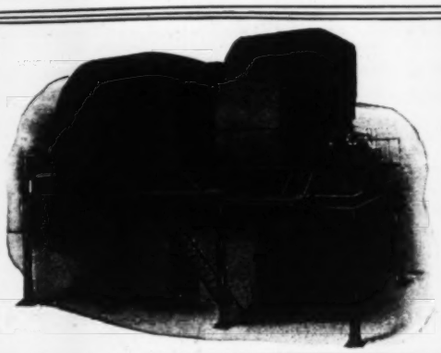

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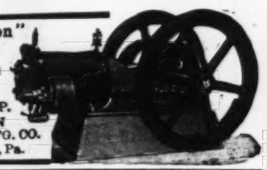

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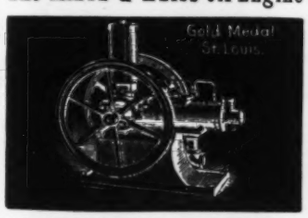

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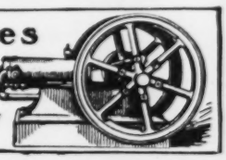

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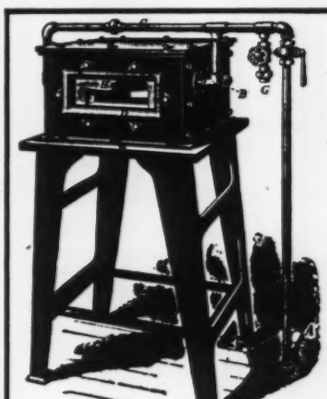

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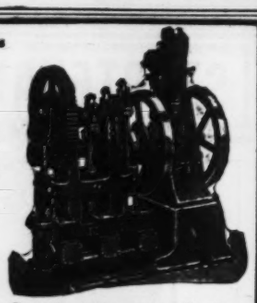

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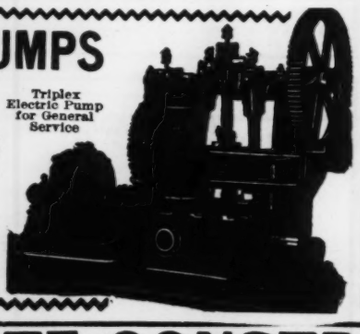

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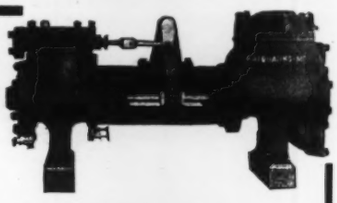

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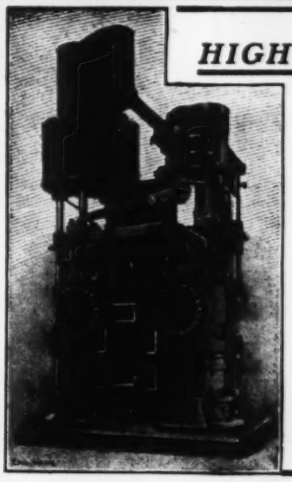

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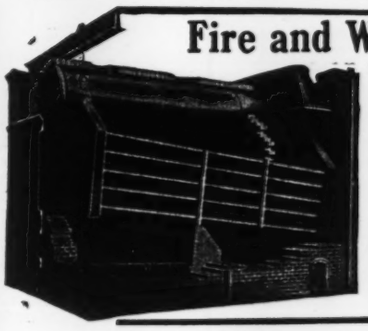

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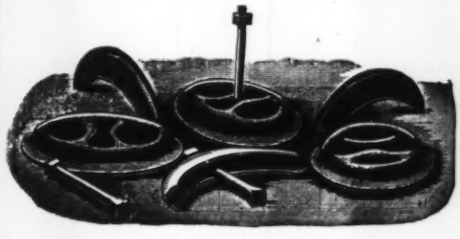

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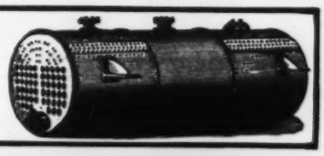

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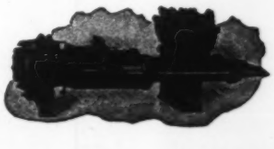

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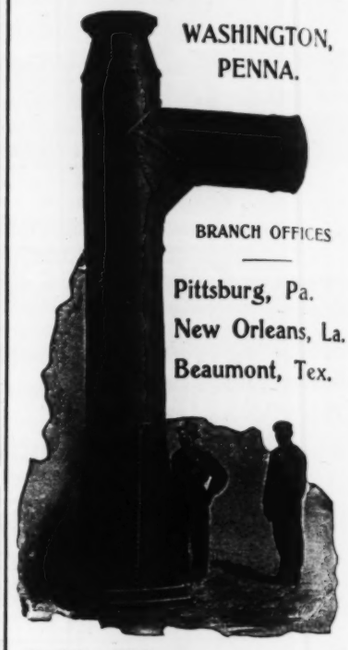

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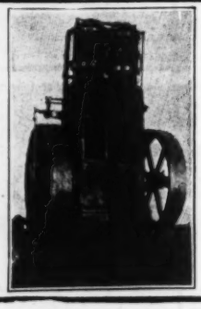

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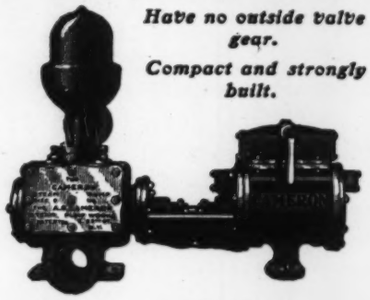

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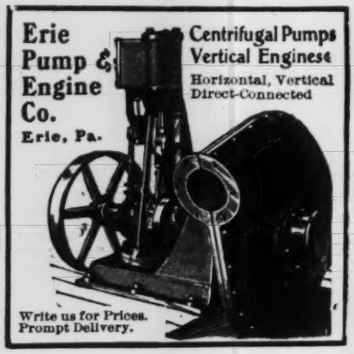

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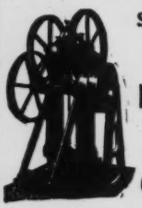

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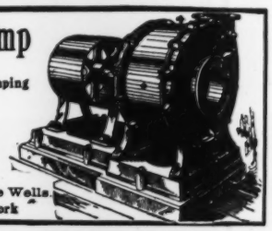

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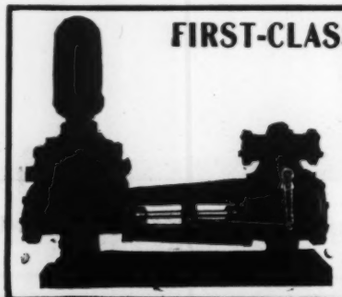

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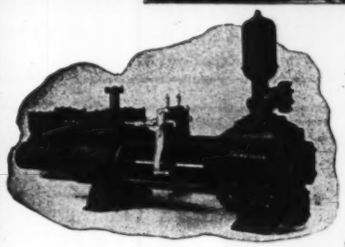

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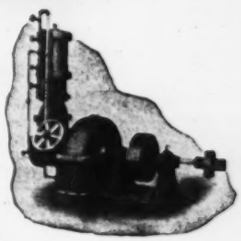

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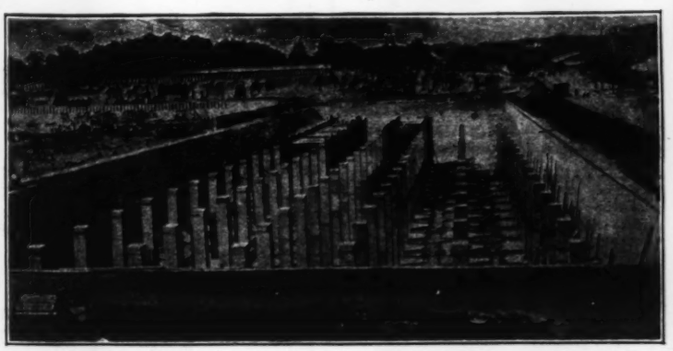

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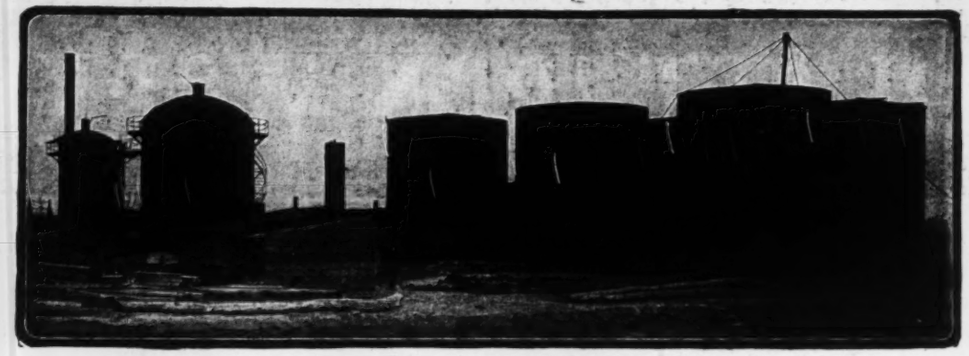

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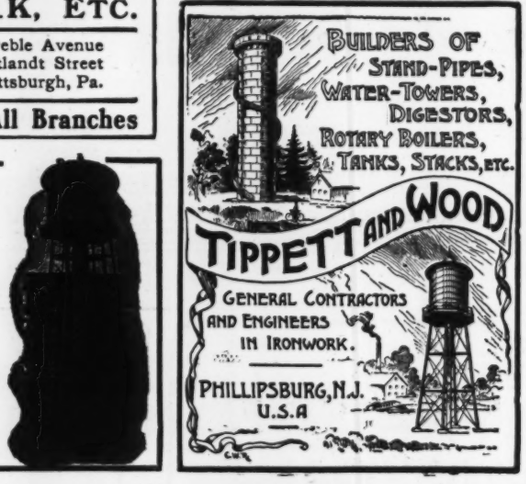

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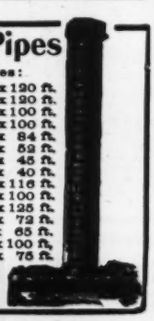

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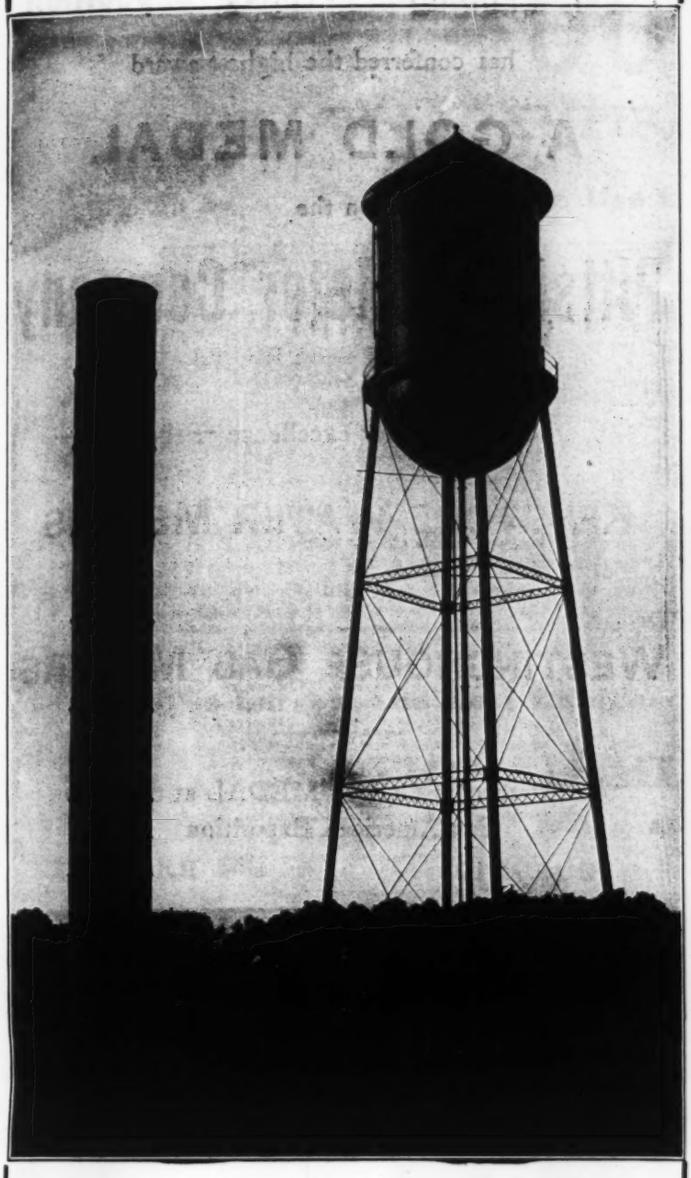

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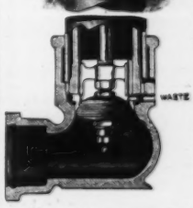

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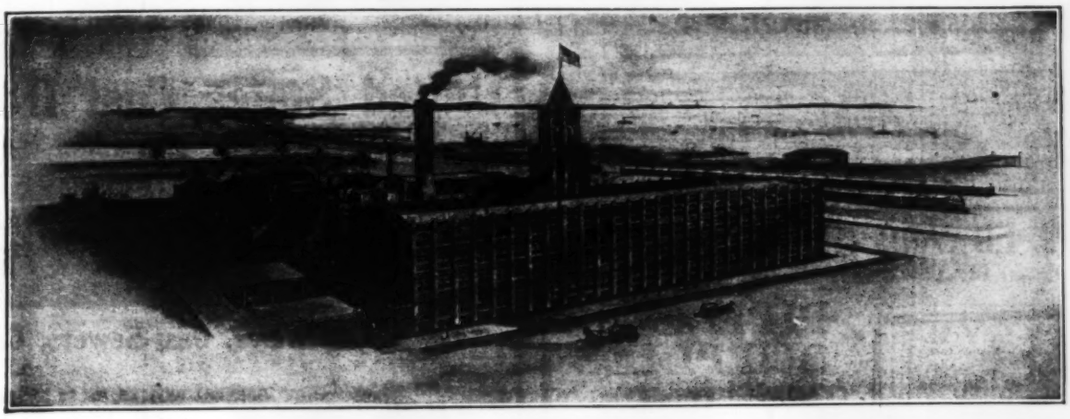

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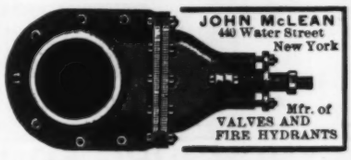

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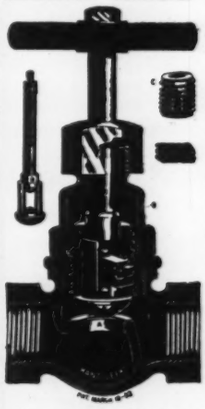

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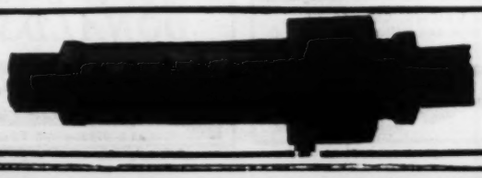

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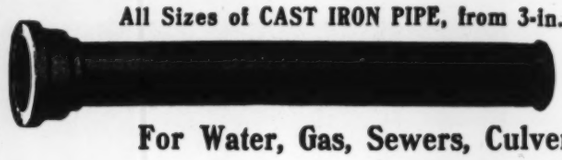

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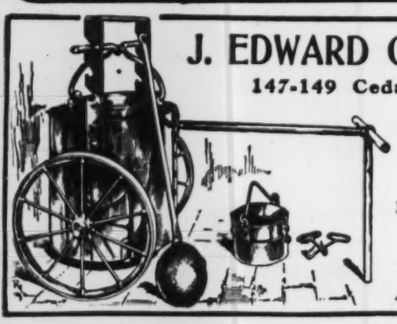

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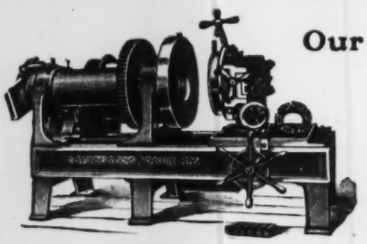

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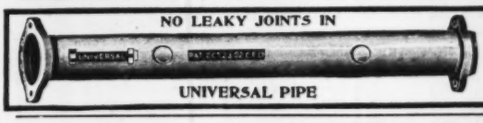

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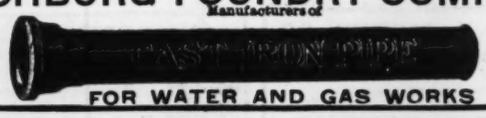

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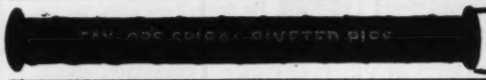

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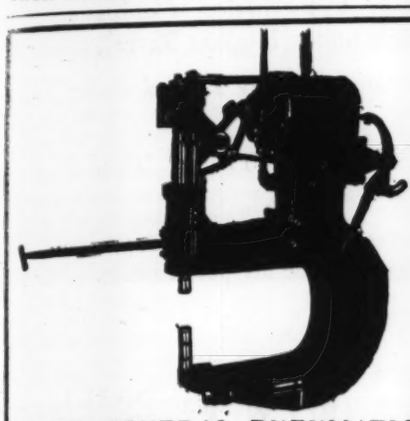

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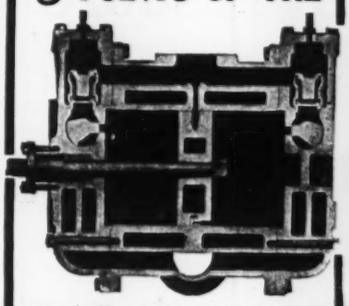

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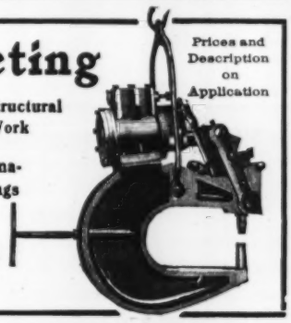

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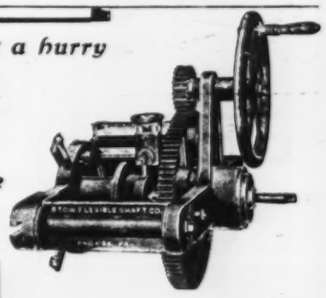

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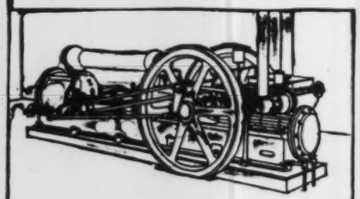

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Vol.	Number.	Vol.	Number.
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20	5	21	2
21	2	22	1
22	4	32	2
26	1	34	1
30	9	35	2
31	5	36	7
32	6	37	5
33	1	38	7
35	1	41	2
		42	3
		44	4
		45	1
		46	6
		47	1
		48	3
		50	4

Back Numbers of 1904.

The following Nos. of ENGINEERING NEWS of the current year are SOLD OUT and cannot be supplied from this office: Jan.-June—Nos. 2, 4, 6, 7, 8, 9, 19, Vol. 51. July-Dec.—Nos. 1, 3, 6, 11, 15, Vol. 52. For 30 years we have done our best to keep unbroken files of our current volumes, but without success. It is now such a frequent occurrence for parties—interested in some article published—to order hundreds of copies for their own disposal that we have given up trying to keep a supply of back numbers for possible subscribers. The weekly average of copies for office sales sent us from the bindery is over 500, and as we never have advance orders for extra copies, this number is all that we deem it good business to risk on possible buyers or subscribers.

From the foregoing statement we hope each subscriber will see the necessity of renewing his subscription promptly, and also advising us immediately if his current copy of the paper fails to arrive on time. Prompt renewal saves us a lot of labor, stationery, postage and uncertainty; a little kindly co-operation in this matter will be faithfully reciprocated by this office.

Have you received a copy of the latest "Price List of Publications" of this company? If not, a postal card request will get you one by return mail. It is of size for insertion in every envelope which leaves this office, and it contains a description of the principal contents of each of the leading books, with dimensions, style of binding, number of pages, etc., and was issued only two weeks ago.

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TO FOREIGN SUBSCRIBERS.

Beginning with December 1st, 1904, the subscription price of ENGINEERING NEWS is FIVE DOLLARS to any address in the world. The foreign edition will, as now, be printed on thin paper and will not contain the Construction News Supplement, which is of so thoroughly a local character that in very few cases indeed can it have any value whatever to foreign subscribers. In case, however, any subscriber wishes the Regular American Edition sent him, we will supply it at NINE DOLLARS per year, the Four Dollars extra being the amount of postage prepaid by us. At the uniform rate of FIVE DOLLARS, Engineering News is the cheapest as well as the best, engineering journal published, and we expect it hereafter to be recognized as not only the leading international class newspaper for professional engineers, but also the very best medium for advertisers seeking the valuable purchasing power which such a wide foreign circulation ensures. Foreign subscriptions now in our books and those on the way, will be adjusted to the new price. We feel sure that our large list of foreign subscribers will welcome this reduction of price, and we hope that each one will call the attention of at least one possible subscriber to our journal.

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A very convenient little pamphlet just published by The Engineering News Publishing Co., is "Railway Location" in Victoria, Australia, by D. M. Fraser, Asst. Engineer Victorian Railways. It was published in Engineering News of May 12th, 1904, but as the paper would soon be out of print, it was deemed advisable to preserve the article in present shape. There are 41 pages and one folder sheet, of size handy for pocket use. Price, 25 cents.

Santa Monica, Cal., Oct. 25, 1904.

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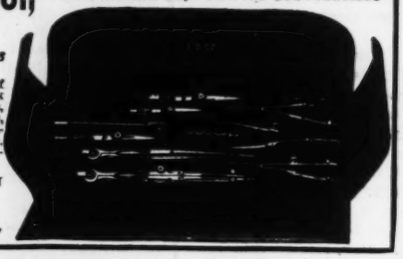

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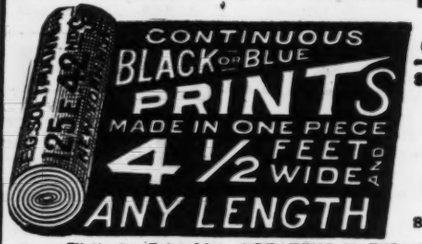

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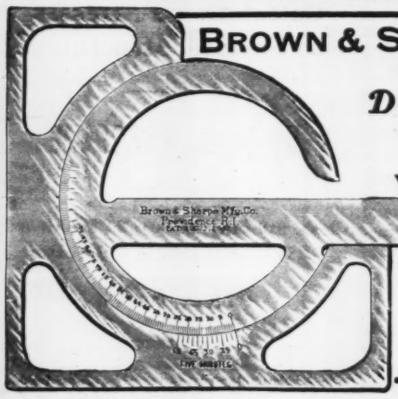

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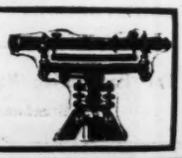

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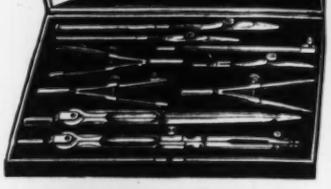

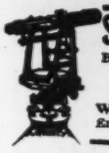

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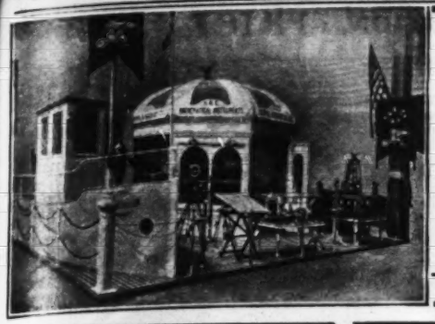

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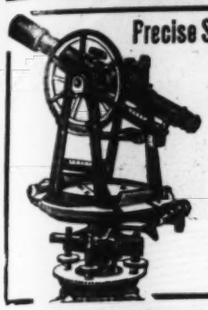

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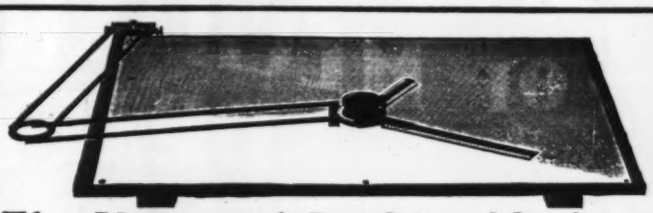

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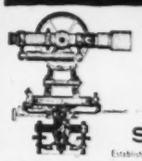

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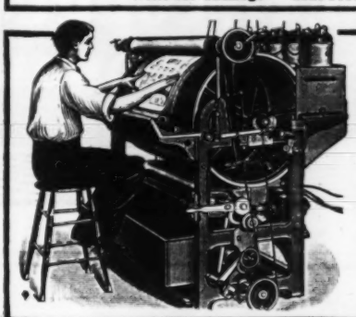

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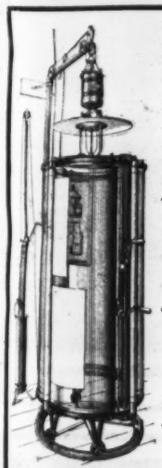

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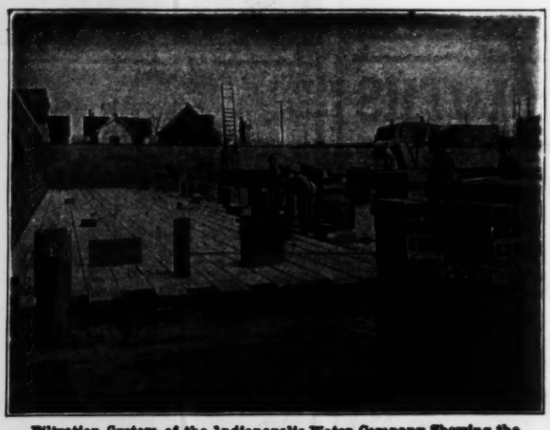

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SITUATIONS WANTED

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STEEL AND WOODEN CAR DESIGNER and Detailer wishes to change location; good estimator. Address "O. 26," Engineering News, New York. 26-1t

STRUCTURAL ENGINEER, capable of handling men, now in charge of work, technical education, ten years' experience in bridges, mill buildings, steel grain elevators, reinforced concrete. Competent designer and estimator, desires to make a change. Address "EXPERIENCE," 1636 Monadnock, Chicago, Ill. 23-5t

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GRADUATE MECHANICAL ENGINEER, all around experience in structural and mechanical line; familiar with foreign and American patent law, speaking English, German, French; good designer; wants position with patent attorney or consulting engineer. Address "G. 26," Engineering News, New York. 26-2t

STRUCTURAL ENGINEER and Draftsman; good designer of mill buildings and bridges, wishes position in the business end, where drafting knowledge will be of value. Address "K 26," Engineering News, New York. 26-1t

SITUATIONS WANTED
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Civil Engineers.

CIVIL ENGINEER, age 33, technical graduate, Assoc. Mem. Am. Soc. C. E., twelve years' experience in difficult location and heavy construction of steam and electric roads, desires position with railroad company or contracting firm. Address "X. 24," Engineering News, New York. 24-3t

RESIDENT ENGINEER, 12 years' practical experience, wants work with above experience after leaving college, having had charge of railroad work, preliminary, projection, location and construction, both in swamps and heavy, rugged mountain work; tunnel construction, pile and frame trestles, concrete and stone masonry, pile driving, steam shovel, track laying and surfacing; good references; age 35; active, healthy and strong. Address "L. 22," Engineering News, New York. 22-5t

TECHNICAL GRADUATE desires position; 5 years' experience in railroad work, location, construction and maintenance; draftsman or instrumentman; can furnish good transit. Address "F. B.," 405 Brady St., Davenport, Ia. 23-4t

YOUNG MAN, technical graduate, with good civil engineering training, wishes position where can get field experience; not afraid of work; moderate compensation. Address "Z. 24," Engineering News, New York. 24-3t

POSITION WANTED.—Civil engineer, technical education, twelve years' experience location and construction of steam and electric railroads, field and office, and general engineering; fair draftsman. Address "ENGINEER," 252 West Third St., Bloomsburg, Pa. 24-3t

GRADUATE ENGINEER, four years' experience railroad location, construction and maintenance, two years' general municipal work, desires position; references. Address "H. 25," Engineering News, New York. 25-4t

GRADUATE CIVIL ENGINEER, thirty-two years old, nine years' experience railroad maintenance of way, now employed, desires change to municipal or county work or other permanent employment. Fair draftsman. South preferred. Address "L. 25," Engineering News, New York. 25-3t

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SITUATIONS WANTED
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POSITION WANTED by civil engineer; 15 years' experience in field and office, railroad work, structural ironwork and municipal improvements; last year and a half with electric railway in field and office on city and interurban lines; references. Address "I. 19," Engineering News, New York. 23-4t

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CIVIL ENGINEER desires position with railroad company or contractor; technical graduate; 7 years' experience railroad location and construction; can furnish good reference and instruments. Address "H. H. MARTZ, Lacey Springs, Va. 25-3t

CIVIL ENGINEER, technical graduate, four years' experience street railway track work, railroad M. of W. and masonry and concrete construction (full charge of latter), desires position with railroad or general contractor; fair draftsman; references. Address "G. A. 25," Engineering News, New York. 25-2t

CIVIL ENGINEER GRADUATE open for position; experienced in field and office, general engineering practice and railroad construction, steam and trolley; good draftsman. Address "A. Z.," Box 604, Mystic, Conn. 26-3t

ENGINEER, 25, four years' experience railroad location, construction, municipal, sewer, etc., private, stadia, and mine; having had charge of work; willing to go anywhere; salary secondary; references; could furnish instruments if necessary; would prefer permanent or in charge. Address "B. 26," Engineering News, New York. 26-4t

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WANTED.—Position as levelman or transitman, by a young man experienced in street railway and irrigation canal work; references. Address KEITH McKERROW, Oil City, Pa. 25-3t

SURVEYOR wishes position; can run transit and level and do any work in field or office. Address "O. A. 22," Engineering News, New York. 25-3t

Draftsmen.

MECHANICAL DRAFTSMAN wants position with mining company; having 7 years' experience in shop and office work in steel construction, general machinery and power plants; now engaged with copper company Address "L. A. 22," Engineering News, New York. 22-6t

YOUNG MAN, formerly draftsman and tracer in civil and mechanical work, desires position as mechanical draftsman or tracer. Location, anywhere. Address "K. 24," Engineering News, New York. 24-6t

STRUCTURAL DRAFTSMAN, college graduate, 11 years' experience, buildings, bridges, wants position, preferably in charge of detail work. Address "K. 25," Engineering News, New York. 25-2t

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SITUATIONS WANTED
See first column for rates

DRAFTSMAN, age 24, neat tracer, desires position in Boston. Address "L. M. B." Box 929, Peabody, Mass. 26-1t

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A RARE COMBINATION of business ability and technical knowledge, wants commercial engineering or other position from Jan. 1. Columbia, Cornell; 7 years' experience; surveyor, draftsman, inspection, erection, purchasing, salesman. Steam, hydraulics, pneumatics, heavy special machinery; advertising, freights, exports, etc. New York preferred. Printed particulars on request. Address "F. 23," Engineering News, New York. 23-7t

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WANTED.—Position as Superintendent or Manager of Water-Works. Twelve years' practical experience in construction. O. C. LONGYEAR, 79 Maiden Lane, Kingston, N. Y. 25-4t

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NOTICE—Want columns of this journal are for the special benefit of persons looking for change of employment or of firms wanting additional help. Persons answering want advertisements outside of the agency column, and finding that the advertisement is in any way connected with employment bureaus, will confer a favor by notifying Engineering News immediately.

Other "WANT" Advertisements may be found on Page 28.

SITUATIONS OPEN (or Vacant)

Rates 3 cents a word a time, set solid; 4 cents single leaded; 4½ cents double leaded; display $1.50 an inch. Miscellaneous wants are the same rate. Copy for Classified Advertisements may be left at any office of the American District Telegraph Co., New York City.

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DRAFTSMEN WANTED.—First-class men on structural and ornamental iron work for buildings; state age, salary and references. Address "F. 26," Engineering News, New York. 26-1t

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MISCELLANEOUS WANTS

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WORK WANTED.—Being completely equipped for machine, pattern, plate, forged, riveted work, etc., we can make low prices and quick deliveries on any orders of this nature, light or heavy; we also hold an efficient engineering force subject to the orders of those having specialties to manufacture or develop. THE NORTH PENN IRON CO., Third and Erie Aves., Philadelphia, Pa. 5-tf

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WANTED.—Second-hand transit. Address EMMET STEECE, Burlington, Ia. 25-4t

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Work for 25 Teams of Mules
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$150.00 to Start
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CHEAP.
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FOR SALE.
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25 6 yd. standard gage K. & J. dump cars.
30 25 ton standard gage flat cars.
1 center Marion plow.
1 left-hand Marion plow (new).
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26 9 x 14 36" gage saddle tank 12 ton engines.
1 10 x 16 36" gage saddle tank 18 ton engines.
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One No. 2 Climax crusher with portable engine and boiler.
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Advertisements in ENGINEERING NEWS cost 1½ cents a word an insertion for "Situations Wanted" and 3 cts. a word for "Situations Open" and "Miscellaneous Wants." Read them weekly as they will help you.

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Bookbuyers in Chicago and vicinity who wish to examine before purchasing, will find a very complete line of Engineering News publications at the store of A. C. McClurg & Company, 215-221 Wabash Ave., Chicago.

FOR SALE

See first column for rates

FOR SALE

See first column for rates

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STEAM SHOVELS, DINKEYS, CARS—Complete Outfit
Bucyrus 65-ton Steam Shovel
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24-4t

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35 Western 5-yd. Dump Cars, Standard Gauge
Locomotives, Steam Shovels, Concrete Mixers
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Switches, Rails
SPECIAL SECOND-HAND BARGAINS IN ALL OF ABOVE
APEX EQUIPMENT CO., 11 Broadway, New York City

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Nearly equal to new
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IN
ENGINEERING NEWS

All advertisements for Situation Wanted columns will be classified as well as the wording will allow. When two or more branches of engineering are mentioned an effort will be made to classify under the heading of the first position mentioned. The advertisement should be headed with the position desired. Advertisers will find it of advantage to mention the place in which they are located. Copy of advertisements, to insure proper classification, should be received by Tuesday noon. The best results from advertising are secured by CONTINUOUS INSERTIONS.

Copy for Want and all kinds of Classified Advertisements for Engineering News may be left at any office in New York City of the AMERICAN DISTRICT TELEGRAPH CO. There is no extra charge for this service, but copy should be left at these branches not later than 10 A. M. Tuesday.

Rates for Classified Advertisements in Engineering News are as follows:

SITUATIONS WANTED, 1½ cents a word a time, set solid; 2 cents a word single leaded; 2½ cents a word double leaded; display, $1.50 an inch a time.

SITUATIONS OPEN (or Positions Vacant), 3 cents a word a time, set solid; 4 cents single leaded, and 4½ cents double leaded; display, $1.50 an inch.

MISCELLANEOUS WANTS (or Business Opportunities), 3 cents a word a time, set solid; 4 cents, single leaded, and 4½ cents double leaded; display, $1.50 an inch.

FOR SALE CARDS, $1.50 an inch an insertion.

Cash must accompany the order. The key, or the address, is charged at so much a word. Engineering News reserves the right to reject any advertisement that may not be suitable for its columns. The name of the advertiser must be on file, but it will not be printed unless ordered. Copies of the paper are charged extra, except when display cards are inserted, when a copy will be sent to the advertiser weekly as long as the advertisement appears in the paper. No advertisement is accepted for less than 25 cents.

ENGINEERING NEWS, 220 Broadway, New York

Other "WANT" Advertisements may be found on page 28.

Situations Wanted

Received too late for pages 26 and 27. Copy should be received by Tuesday a. m.

Draftsmen.

STRUCTURAL DRAFTSMAN open for engagement; several years' experience; can furnish good references. Address "L. 26," Engineering News, New York. 26-1t

Miscellaneous Wants

Free Offer to Any City

I make a bona-fide offer to erect and operate free incinerators to take any city's output of refuse and handle it without nuisance for a franchise to do the work. Correspondence solicited.

LEWIS COLWELL, Engineer
1-tf 74 Cortlandt Street, New York

FOR SALE

Space under this head is sold at the uniform rate of $1.50 an inch; minimum charge, $1.50 a week . . .

Contractors' Machinery in Stock at Our Jersey City Warehouse For Immediate Delivery

No. 3 Gates Stone Crusher.
10 x 20 Blake Stone Crusher.
Three Cockburn Concrete Mixers.
Two Ingersoll-Sergeant Channeling Machines.
7 x 7 x 7 Clayton Duplex Air Compressor.
Three Rock Drills.
50-ft. Derrick.
Two 7 x 10 D. C. D. D. Hoisting Engines, with boilers and patent Boom swinging gear.
75-HP., 12¼ x 15 D. C. D. D. Lidgerwood Cableway Engine.
One yard Lancaster Locomotive Hoister, Digger or Dredge.
Three 6-in. Centrifugal Pumps, belted type.
Three 6-in. Centrifugal Pumps, Engine-driven.
One 10-in. Centrifugal Pump, belted type.
14 x 14 x 14 Davidson Tank Pumps.
Nos. 2, 3, 5 and 7 Pulsometer Pumps.
16 x 15 x 16 Straight Line Compressor.
15 and 25-ton Quarry Hoisters.
25, 30, 40 and 50-HP. Locomotive Boilers, on wheels.

ALL CONTRACTORS INVITED TO VISIT OUR WAREHOUSE TO INSPECT OUR STOCK. WE REBUILD OUR SECOND-HAND MACHINERY AND GUARANTEE IT.

WICKES BROS.
113-115 Cedar St., New York City

FOR SALE

14 x 22 4-driver Saddle Tank Locomotive.
2½ ton Traveling Derrick, 32 ft. steel boom.
Cableway, 975 feet, 10 x 14 Engine and Boiler.
15-ton Industrial Locomotive Crane.
Relaying Rails, 30, 35, 45, 50, 58 and 60 lb.

CHARLES F. AVERY, 45 Broadway, N. Y.

FOR SALE.

Clam Shell Bucket

Patent No. 755,912, March 29, 1904. Write for copy of letter patent.

W. K. M.
26-1t 68 Oakdale Street, Cleveland, O.

IF you intend ENGAGING RELIABLE ENGINEERING ASSISTANCE we suggest that you insert a notice on our "Want" page under

Situations Open

The cost is 3 cents a word an insertion. Copy may be left without extra charge at any office in New York of the AMERICAN DISTRICT TELEGRAPH CO., or at the office of

THE ENGINEERING NEWS PUBLISHING CO.

TRADE WITH MEXICO!

If you want to increase your business in Mexico read our special news reports from that country.

Mexico imports over $30,000,000 worth of goods a year from the United States,

or more than half of its imports. American machinery and supplies are needed in all parts of the country. "Engineering News" is sent to nearly all names mentioned in the items besides to a large list of regular paid subscribers.

They all are anxious to buy the latest machinery, tools, etc. Follow our Construction News and ADVERTISE in "Engineering News."

NOTICE OUR FOREIGN NEWS.

FOR SALE

See first column for rates

FOR SALE

See first column for rates

FOR SALE

STEAM SHOVELS—1 Thew Automatic 1¼ yd., on Standard Trucks.....$3,500
1 Vulcan Traction, 1¼ yd., on Standard Trucks.....$1,800

LOCOMOTIVES—2 Vandalia, Passenger Type, 16x24 in.; 1 for $800 and 1 for.....$1,200
1 Standard Passenger (Franklin) 16-x24 in.....$1,500
1 C., B. & Q. 4-wheel Switcher.....$2,000
2 Manhattan, Forney Type.....$1,500 and
1 12-ton 36 in. gauge Saddle Tank Davenport, with 12 3-yd. 36 in. gauge Western Side Dump Cars, $2,500

CARS—8 Hart Type Rodger Convertible Ballast Cars, 80,000 lbs. capacity, each.....$750
1 Double Plow Car, same type.....$750
10 Standard Gauge Flat Cars, 50,000 lbs. capacity, each.....$250

HOISTER—Lidgerwood 7x10, Dbl. Cylinder and Dbl. Drum.....$600

CONCRETE MIXER—Smith No. 2½, with Engine.....$600

BOILERS—1 25 HP. Atlas Locomotive type.....$180
1 Atlas Return Tubular, 48 in. x 14 ft., with 40 3 in. tubes.....$225

PUMPS—6 Edson Diaphragm No. 4. Price, with 20 feet of 4 in. Suction Hose.....$50
Price, with 10 feet of 4 in. Suction Hose.....$40
2 Worthington Steam Duplex, 5¼x-3¼x5 in., each.....$50
1 Worthington Duplex, 1½ in. discharge.....$40

ALL in first-class operating condition, can be delivered promptly, but are subject to prior sale. Prices are f. o. b. cars point of shipment. Address inquiries to 24-3t

INDIANA UNION TRACTION COMPANY, Anderson, Indiana

Please mention ENGINEERING NEWS.

Bargains FOR SALE Immediate Delivery

STEAM SHOVELS.

Model 20, 1¼-yard dipper; like new; ready for shipment; Philadelphia delivery.
Bucyrus, 65-ton, latest model, used about 7 weeks, brand new; a great bargain; immediate delivery.

RAILS.

About 117 tons of new 60-lb. steel T rails, in 60-ft. lengths, with angle bars to match; prompt delivery.
Several hundred tons 35 and 40-lb. good relayers, with splices; 150 tons ready for prompt delivery.
60 tons new 7-in. Lorain section No. 291, flange girders, with complete joints and tie rods.

LOCOMOTIVES.

18 x 24 Mogul, about 50 tons, just out of shops, like new.
18 x 24 American Type, 40 tons, new tender, splendid shape.
Three 9 x 14 Dickson, saddle tanks, 36-in. gage, good as new; prices to suit; Philadelphia delivery.

CARS.

Lot of 24-in. gage Western 1½-yd, two-way dump cars, steel bottoms, first-class condition.
18 1½-yd., 36-in. gage, two-way dump cars; prices to suit; Philadelphia delivery.

DALLETT & COMPANY, 201 Walnut Place, Philadelphia, Pa.

FOR SALE

For Sale at Brewsters, N. Y.

1 6" Knowles pump.
1 1¼" Knowles pump.
2 Byers Hoisters, Double Drum.
1 Ryan & McDonal, Single Drum.
1 Byers, Single Drum.
1 Hoardly Eng. & Boiler on wheels.
1 Erie Boiler on wheels, 40 HP.
4,000 ft. wire guy.
2 Iron Buckets, 1 yd.
6 Lumber Wagons.
6 Ton Rail.
5 Western Dump Cars, 1¼ yds.
2 Jacks.
16 Heavy Horses and Harness.
9 Watson Wagons.
1 Caravan.
1 Sullivan Rock Drill.
And other Contracting Plant.

For Sale at Mohawk, N. Y.

1 15-ton Buffalo Pitts Steam Road Roller.
1 Carson Trench Machine.
1 Traveling Derrick.
1 Disk Roller.
1 Dirt Roller.
1 6" Knowles pump.
3 4" Knowles pump.
1 4" Blake pump.
1 2" Worthington pump.
2 Large Safes.
4 pr. Bob Sleighs.
1 Horizontal Boiler.
1 Engine and Boiler.
6 Electric Lamps.
2 Hay Scales, complete.
6 Hydraulic Jacks.
114 Tamping bars and picks, new.
14 Wheeled scrapers.
4 2-Wheeled Dump Carts.
9 Hand Derricks.
2 2-yd. Ryan & McDonal dump cars, 36".
1 Tucker Cabinet.
1 Remington Typewriter No. 2.
1 Gurley Transit.
1 Copeland & Bacon Eng. & Boiler, S. Drum.
1 Locomotive.

Address F. W. CLARK, Brewsters, N. Y., and CHAS. BELL, Attorney, Herkimer, N. Y.

BECKWITH & QUACKENBUSH, Mohawk, N. Y. 23-4t

Locations for Industries

Erie Railroad System New York to Chicago

The Erie Railroad System's Industrial Department has all the territory traversed by the railroad districted in relation to resources, markets and advantages for manufacturing, and can advise with manufacturers of specific products as to suitable locations, furnishing them with current information of a comprehensive nature, dealing with the project in its full relation to manufacture and commerce. Address.

LUIS JACKSON
Industrial Commissioner
Erie Railroad Company
21 Cortlandt Street, New York

FOR SALE—For Prompt Shipment

56, 60, 63, 65 and 68-lb. STEEL RELAYING RAILS

AND SPLICE BARS

Also other weights of choice Relaying Rails. New Light Rails, 12, 16, 20, 25, 30, 35, 40 and 45-lb. per yard, and splice joints for same.

ROBINSON & ORR,
419 Wood Street PITTSBURGH, PA.
☞ We sell New Frogs and Switches.

Rebuilt Contractors' Machinery

6 in. x 10 in. 26-in. gage Porter Saddle Tank Locomotive.
Three 26-in. gage Dump Cars.
4-yd. 36-in. gage Dump Car.
1½-yd. 36-in. gage Dump Car.
5-ft. Cube Concrete Mixer.
No. 2½ Smith Concrete Mixer.
No. 4 Hand Power Ransome Concrete Mixer.
No. 5, Style D, Gates Stone Crusher.
15 in. x 9 in. Champion Stone Crusher.
15 in. x 9 in. Blake Stone Crusher.
15 in. x 7 in. Blake Stone Crusher.
25-HP. Portable Engine and Boiler on wheels.

Portable Boilers

80, 50, 40, 35 and 25 HP.

Hoisting Engines

20 in stock, with one, two, three and four drums, with and without boilers.

Carlin Machinery & Supply Co.
INC.
Lapock and Sandusky Sts., Allegheny, Pa.

FOR SALE

Worthington Duplex Pump

10 in. high pressure cylinder, 18¼ in. low pressure cylinder, 12 in. water cylinder, 10 in. stroke, 8 in. suction, 7 in. discharge. Only run 6 months since returned from shop after thorough repairing. Can be seen at Fulton pumping station, set up.

O. C. TAFT, Supt. of Public Works
Fulton, N. Y.

CLASSIFIED DIRECTORY OF ADVERTISEMENTS

[An effort will be made to classify material or business advertised, and changes will be made weekly, if possible, to correspond with the most important subject in the advertisement.]

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A copy of the CLASSIFIED DIRECTORY OF ADVERTISERS in Engineering News will be mailed upon application to Engineering News, New York.

SITUATION OPEN advertisements received Wednesday A. M., will be found on the Proposal page of the Construction News section.

The $50,000,000 World's Fair, St. Louis, Mo.

Bought by the Chicago House Wrecking Co.

THE LOUISIANA PURCHASE EXPOSITION, the most wonderful the World ever knew, has been purchased in its entirety by this Company. THE EXPOSITION, is unquestionably, the grandest architectural feat ever accomplished. The buildings are the most gigantic that it was possible to construct. Nothing like it was ever before attempted in magnitude. It covered 1240 acres of land, and was over twice as large as the WORLD'S FAIR OF CHICAGO, 1893, and four times as large as the last PARIS EXPOSITION. As the close of the EXPOSITION drew near, the Directors found that there was only one Company extant able to properly dismantle the FAIR. It was but natural to conclude negotiations with this Company, as we have dismantled every EXPOSITION of modern days. We purchased and dismantled the WORLD'S FAIR OF CHICAGO, 1893; THE TRANS-MISSISSIPPI EXPOSITION, OMAHA, 1899; THE PAN-AMERICAN EXPOSITION, BUFFALO, 1901.

By our acquisition of the LOUISIANA PURCHASE EXPOSITION, we have come into possession of the largest amount material and supplies possessed by any one concern in this Country. We are in position to make exceedingly advantageous propositions for the sale of large quantities of this material provided a quick sale can be effected. We are very desirous of moving as much as possible during the winter months. We have a large force of men on the EXPOSITION GROUNDS, now engaged in placing the material in marketable shape.

We briefly enumerate some of the more important items which we will have to dispose of:

100,000,000 ft. of Highly Seasoned Lumber

This is the time to buy lumber. Prices are ever advancing. We have everything in the lumber line, SHEATHING BOARDS, JOISTS, TIMBERS, FLOORING, PLANKING, FENCING, and all kinds of interior finish.

SASH AND DOORS.

Thousands of sash and doors, in every size.

HYDRAULIC PAVING BRICK.

3 miles of Hydraulic Paving Brick.

TRUSSES.

Thousands of fine wooden trusses, of every kind and size. Send us specifications of your wants.

STEEL STRUCTURE.

For immediate delivery. The Power House, built by the American Bridge Company. It is 220 ft. by 450 ft.

500 CAR LOADS OF PIPE.

A chance to purchase from us anything in the line of manufactured pipe, for any purpose.
Standard Black Wrought Iron Pipe, in sizes from ⅜ to 12 inches.
Galvanized Standard Pipe, in sizes from ⅜ to 6 inches.
Converse Gas and Water Pipe, in sizes from 2 to 8 inches.
A large quantity for Extra Heavy Wrought Iron Pipe, sizes 3 to 36 in. intended for high pressure, most of it fitted with flanged couplings.
2 miles of riveted steel pipe, in sizes from 8 to 40 inch.
Cast Iron Pipe for water and gas, size 4 to 30 inch.
A quantity of Wood Pipe, 4½ × 4½ inches, 6-foot lengths.

VALVES AND FITTINGS.

A complete stock of Globe, Angle, Check, Gate, Pressure and other valves, for screwed and flanged pipe. Thousands of fittings of every kind.

MACHINERY AND ELECTRICAL EQUIPMENT.

3 200-HP. "Heine" water tube boilers.
3 36 × 48, heavy duty Wm. Todd reversible engines.
3 40-KW. 125 volt "Norton" multi-polar generators, with switch board and instruments.
1 14 × 24 × 14 Westinghouse Compound Engine.
1 13 × 22 × 13 Westinghouse Compound Engine.
4 Boiler Feed Pumps.
50 motors, ranging from 1-HP. to 45-HP., and from 110 to 500 volt.
6 Steam Road Rollers, 3, 5, 6 and 7 ton.
12 Worthington Underwriter fire pumps, 18 × 10 × 12.
1 Triplex Pump, 4 × 4, direct connected.

RAIL AND EQUIPMENT.

6,000 ton 60-pound steel rail.
100 ton 12 pound.
25 ton 16 pounds.
10 Standard Gauge Hand Cars.
250 frogs, 4 to 9 foot.
200 switch points.
Thousands of rail braces.
200 switch plates.
5 rail benders.
1 Cleveland Track-Drilling Machine.
Car replacers, track gauges, rail drills, etc.

ROOFING MATERIAL.

All kinds of Iron and Steel Corrugated and Flat Roofing. Also, roofing coverings, in such brands as Flint-Kote, Ruberoid, Asphalt, Felt, etc.

PLUMBING MATERIAL.

1,700 bath room outfits, consisting of closets and lavatories; also, bath tubs, sinks, soil pipe and fittings.

ELECTRICAL APPARATUS.

$500,000 worth of Copper Wire, Weather Proof, Rubber Covered and Slow Burning. Sizes 18 to 800,000 C. M.
$250,000 worth of Lead Covered Cables.
50,000 pounds of No. 00 bare copper wire.
500,000 Incandescent Lamps, some of them never used.
Annunciators, annunciator wire, storage batteries, fuses, plugs, receptacles, sockets and trolley material.
50 Transformers, 110, 220 and 2,200 volt.

FIRE FIGHTING APPARATUS.

100,000 feet 1½ and 2½ inch Cotton Rubber Lined Hose, and 4-ply Solid Rubber Hose.
2,000 feet of 1-inch rubber hose.
5,000 feet of ¾-inch rubber hose.
100 deck revolving turret stand-pipes, 2 and 3 inch. Cost $250.00 each.
500 water hydrants, for high and low pressure systems.
500 Automatic Sprinklers.
2 complete Automatic Sprinkler Systems.
20 "Cooney" mill hose carts.
6 Eastman Deluge Water Sets, complete with all equipment.
1 Hook and Ladder Truck, manufactured by the Fire Extinguisher Manufacturing Co., of Chicago.
1 Combination Hose Wagon with ladder.
2 Locomotive Stand-Pipes.
5 Fire Engines.
4 Chemical Hose Wagons.
1 Aerial Truck.
25 Gamewell Fire Alarm Boxes, and vast quantities of other material.

DUMP CARS.

50 No. 11 Sheffield steel rotary dump cars, 21¼-inch gauge, capacity 23 cubic feet.

SMOKE STACKS.

15 special extra heavy smoke stacks, from 40 inch to 11 feet diameter.

CEDAR POLES.

500 cedar poles, 7-inch top, 40 and 50 feet long.

ROAD SCRAPERS.

75 Western wheel and drag scrapers.

WHEEL-BARROWS.

500 Steel Tray Wheel-Barrows, with steel wheels.

SHOVELS.

300 dozen all kinds. Also digging bars, ditching spades, and the like.

DRAWING MATERIAL AND SURVEYORS' INSTRUMENTS.

100 drawing boards, 15 adjustable drawing boards, 8 20-inch Gurley Levels, 10 Gurley Transits, wire tape, thumb-tacks, drawing pens, etc.

OFFICE FIXTURES.

Thousands of Dollars' Worth, consisting of roll top desks, flat top desks, revolving chairs, sectional index cabinets, vertical letter files, typewriter desks, typewriters and supplies of every sort.

FURNITURE AND MATERIAL.

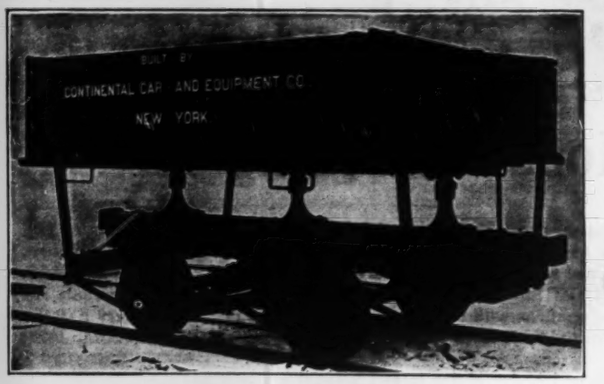
2,000 Iron Beds, 3,000 Wool Blankets, 4,000 Bed Sheets, besides pillow cases and bedding of all kinds; 250 combination dressers and commodes, 2,000 U. S. Army Folding Cots, 25,000 chairs, dishes and other material in profusion.

Thousands of other items. Besides the above, we enumerate some of the items we have for sale. Sky Lights, Wire Netting, Flags and Poles, Stair Cases and Balustrades, Eave Trough and Conductor Pipe, Surveyors' Transits and Levels, Sprinkler Wagons, Two Studebaker Patent Boulevard Sprinkling Wagons, with 600 gallon tank perforators, Four Wooden Tank Water Wagons, One 2 Horse Studebaker Sprinkling Machine, Iron Fencing, Woven Wire Fencing, Bolts, Screws, Turn-Buckles, Washers, etc., Turnstiles, Water Filters, Green Houses, Cedar Posts, Search Lights, Rotary Pumps, Opera Chairs, Fire Extinguishers, Electric Passenger Elevators, Trucks, Scales, Safes, Oil Tanks, Chain, Rope, Lanterns, Jack Screws, Hardware of all kinds, Step Ladders, Blocks, Winches, Tackles, Wagons and Buggies, etc., etc., etc., etc.

Come to St. Louis. It will pay you to call and inspect the enormous amount of material we are offering for sale. Our Exposition Catalogue No. 258 sent on application. (Address our St. Louis Office.)

CHICAGO HOUSE WRECKING CO.

Main Office, Warehouse and Yards: W. 35th and Iron Sts., Chicago, Ill. St. Louis Yards: Exposition Grounds, St. Louis, Mo.



Our Six-Yard Diamond Frame Car

Dump Cars

Covered by the Ustick Patents

Eighteen Styles *Six Sizes*

Catalogue Upon Request

CONTINENTAL CAR & EQUIPMENT CO.

Whitehall Building, New York City

Branch Office, Missouri Trust Building, ST. LOUIS, MO.

Cable Address, Conequico, New York

FOR SALE

Space under this head is sold at the uniform rate of $1.50 an inch; minimum charge, $1.50 a week . . .

FOR SALE

One PORTABLE CRUSHING PLANT, complete Engine, Boiler and Crusher mounted on wheels, in fine condition, capacity 100 to 150 tons per day; to be sold at a bargain if taken before removal.

One HAYWARD DREDGE, 3 cubic yards capacity; bargain.

4 7 x 10 HOISTERS with and without boilers.

65 tons of 25 and 30-lb. RELAYERS with plates.

One 14 x 30 DIXON CORLISS ENGINE; fine order.

ALSO CONTRACTORS' PLANTS FOR SALE OR RENT.

Harper Machinery Company

Park Row Bldg., New York

Yards and Shops, Newark, N. J.

Second-hand Wrought Iron Pipe For Sale Cheap

500 ft. 16 in. O. D. } Good for culvert purposes.
600 ft. 14 in. O. D. }
12,000 ft. 2½ I. D. Standard pipe.
10,000 ft. 2 in. I. D. Standard pipe.
Also boiler tubes, all sizes, cut to lengths, low prices.

PITTSBURGH PIPE & IRON COMPANY
McKees Rocks, Pa.

FOR SALE

One 30-ton Capacity

Guy Derrick

complete with guys, necessary wire rope, for 8 part topping lift and 6 part hoisting lift, together with blocks and fixtures and 14-ft. diameter bull wheel, 50-ft. mast and boom together with one Lambert 8¼ x 10 double cylinder double drum hoisting engine with boiler complete with Lambert patent swinging gear. This outfit has been used about a month and is as good as new. Address,

W. A. 22

Engineering News, New York

BRIDGES FOR SALE

Spans 25 to 300 feet. Several spans 100 to 150 feet in first class condition. Suitable for Electric Roads. C. N. GREEN, Civil Engineer, 1947 Broadway, N. Y.

DO NOT BUY Second-Hand Locomotives

They are a source of constant worry and expense. GET OUR PRICES ON NEW LOCOMOTIVES on hand, 9 x 14, 10 x 16, standard and narrow gauges.

DAVENPORT LOCOMOTIVE WORKS, Davenport, Iowa.

Contractors & Railway Supply Co.

Keystone Bldg., Pittsburg, Pa.

New and Second-Hand Plant of All Kinds

Agents Western Wheeled Scraper Co.

THE CINCINNATI EQUIPMENT COMPANY

Cincinnati, Ohio, U. S. A.

LOCOMOTIVES, 36-inch GAGE

1 8 x 14 Porter Dinkey.
1 7 x 10 Baldwin Dinkey.
1 12 x 18 Mason Forney type.
2 11 x 16 24-ton Baldwin American type.
1 14 x 20 26-ton Grant American type.
1 12 x 18 24-ton Baldwin Mogul.
1 12 x 18 22-ton Porter, 6-driver saddletank, with pair trailers.
1 Marion right-hand Side Plow.
1 Center Plow.

STEAM SHOVELS

1 65-ton, 2½-yd. Bucyrus.
1 1¼-yd. Industrial. 2 1¾-yd. Otis.

LOCOMOTIVES, STANDARD GAGE

1 20 x 24 54-ton Baldwin Consolidation.
2 19 x 24 50-ton Baldwin Moguls.
1 15 x 18 29-ton 6-wheel Saddletank.
1 14 x 22 30-ton American type.
1 16 x 24 35-ton Danforth & Cook American type.
1 7 x 12 13-ton Shay geared.
20 18 x 24 45-ton, 10 wheelers.

CARS

35 5-yd. Western, steel frame, standard gage.
75 50,000 cap. Flats, with Air Brakes.
50 3 and 4-yd. 36-in. gage. Coaches, Flats and Gondolas.

Works at Cullens' Station, O
Chicago Office, 522-524 Monadnock Block

Locomotive Repair Work Solicited

Bargains in LOCOMOTIVES, STEAM SHOVELS, DUMP CARS

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Little Giant traction, crowding engines.
Little Giant Special, friction, S. G. trucks.
Style A Marion, 1½ yd. dipper.
Improved A Marion, crowding engines.
55 ton 2 yard Bucyrus, friction.
65 ton 2½ yard Bucyrus, crowding engines.
70 ton 2½ yard Vulcan, three sets engines.

Locomotives

7 x 12 Porter 4 D., S.T., 42" gage.
8 x 14 Porter 4 D., S.T., 24" gage.
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Dump Cars

25 1½ yard Western, 24" gage.
23 3 yard Dia. frame Western, 36" gage.
12 1½ yard R. McD. rotary, 36" gage.
4 5 yard Western dia. frame, standard gage.

Pierce well drilling machine, hoisting engines, wagons, graders, etc.

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See first column for rates

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1,000 tons 56 lb. RELAYERS, with splices, New York, Pennsylvania and Ohio delivery.
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Also other sizes of RELAYING and NEW STEEL "T" RAILS in stock.
Write or wire us for prices and particulars.

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Marion A, 1¼-yard Dipper

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3 50-Ton, 10-Wheel, as above.
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Standard or Narrow Gauge for All Classes of Service

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Porter build, Cylinders 12 x 18 in. Weight, loaded, 20 tons. Recently overhauled. Ready for immediate delivery.

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Two hand cranes.

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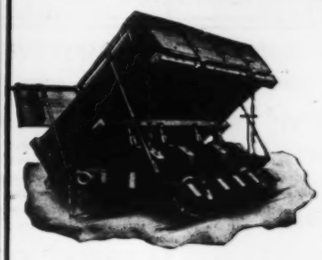

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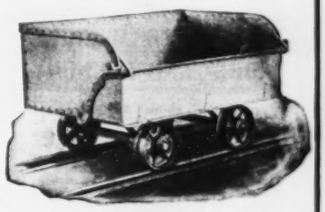

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Rebuilt and improved. Experienced crews ready to go with steam shovels if desired.

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First class condition. Ready for immediate shipment. Apply to

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Steel Dump Car, with Rings for Cranes

If Your Wants Are Limited

we will furnish you from stock a single Car of any kind, Steel Rails from 9 lbs. up in any quantity, Permanent or Portable Track as much as you want, just as cheerfully as if you ordered in large quantities.

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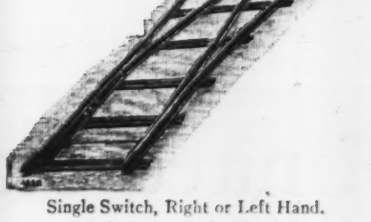

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occupying about five acres of ground and situated on the P. R. R. and the Monongahela River in the Pittsburg district.
The Plant is equipped with new modern tools throughout, such as two 10-ton Pawling & Harnischfeger Electric Cranes; 150 K. W. Ridgway-McEwen Engine and Generator, direct connected; Ingersoll-Sergeant Air Compressor; one 10-foot Betts Boring Mill; one 10-foot- 16-foot Betts Boring Mill, etc. The plant is fully equipped for the manufacture of mining machinery in which business it is now engaged.
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25-4t

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"I wish to thank you for your efforts in securing me prices on machinery. I have secured a number of inquiries as the result of notices sent out by you and have purchased the two asphalt rollers we require from one of the firms."

R. L. L., Ark.

FOR SALE
See first column for rates

FOR SALE
See first column for rates

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Contractor retiring from business, will either sell outright complete outfit for conducting a general line of steam shovel work, or will co-operate with parties having $25,000 in cash, or more, in assisting them to start in the contracting business, retaining an interest in the outfit waiting for balance necessary to buy entire outfit until profits are available, or would rent entire outfit for a period of 3 months or more (not less), allowing the first 2 or 3 months' rental to apply on purchase price

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20	steam shovels, 30 to 90 tons.	2	7¼ × 10 D. D. D. C. Mundy engines with boilers and swinging gear.
2	14 × 22 Std. S. T. locomotives.	100	36" side dump cars, 3 yds.
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10	9 × 14 36" gage S. T. locomotives.	500	tons 60 lb. relaying rails.
5	miles 25 lb. relaying rails.		

If you want to buy or sell contractors' plant or railway equipment of any description, we can help you. Wire, telephone or write us.

CONTRACTORS' EQUIPMENT COMPANY

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New Train Service to Florida, Aiken and Augusta.

The Southern Railway announces, effective November 6th, a new train will be put on between New York City and Jacksonville Fla. Leaving New York daily at 3.25 P. M carrying through Pullman Drawing Room Sleeping cars New York to Jacksonville and Augusta, with connections for Aiken, Camden and Charleston. This train will also carry Southern Railway Dining cars.

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A book of information descriptive of the winter health and pleasure resorts of the South, where the tourist or invalid may avoid the rigors of the northern winter, enjoying the perpetual comforts of the South, is just being issued by the passenger department and will be mailed to any address upon receipt of two cents postage. New York office, 271 and 1185 Broadway. Alex S. Thweatt, Eastern Passenger Agent.

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may be left at the office of the
ALLEN ADVERTISING AGENCY
617 6th Ave., near 36th St.
or at any office in New York City of the
AMERICAN
DISTRICT TELEGRAPH CO.

Copies of ENGINEERING NEWS may be purchased at Allen Advertising Agency. The advertisments may be keyed so as to have answers addressed to any offices of the above-mentioned companies. Out of town orders for advertisements or copies of the paper must be mailed to the head office, 220 Broadway, New York.

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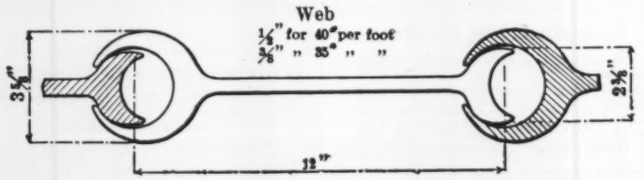
Simple : Interlocking : Absolutely Watertight



A plain rolled section. Each piece complete in itself and interchangeable. No rivets, bolts or other attachments.

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Superior for any use to any known form of Sheet Piling

United States Steel Piling Company

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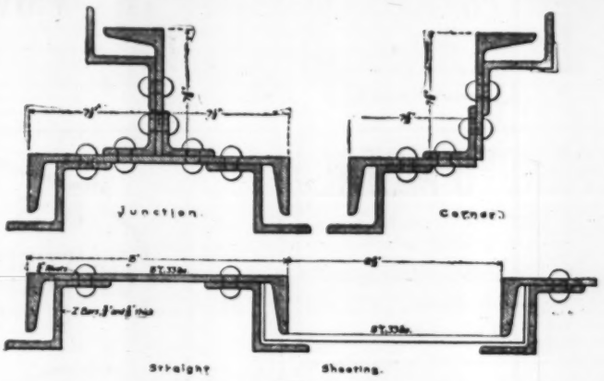
QUICK SAND

The Only Form of

Steel Piling

that will Absolutely Penetrate Quick Sand to Any Depth

It is Watertight



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Mine Shafts, Coffer Dams
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"When considering the purchase of Steel Piling an answer to the following questions is of vital importance:

Have you ever sold any of your product if so, where?

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We can reply to the above to your satisfaction and have the best of endorsements from Railroads, Contractors and Engineers."

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No working in the dark. Large tapering piles.
Have the best and save money.
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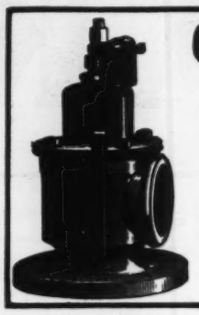
See our advertisement page 30
CONTINENTAL CAR AND EQUIPMENT COMPANY
Branch Office, Missouri Trust Bldg., St. Louis, Mo. Whitehall Bldg., N. Y. City



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Penetrates to the Pores. Water-proof and Acid-Proof. Does not blister or flake. Booklet "D."
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STEEL ROLLING DOORS SHUTTERS AND PARTITIONS
ARE DURABLE AND EASILY OPERATED
FOR BUILDINGS OF EVERY CLASS
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BUILDERS IRON FOUNDRY
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Globe Special Castings
For Water Works
There are no useless accumulations of metal. The castings are, consequently, comparatively light; an advantage in first cost, freight and handling.
M. J. DRUMMOND & CO., Sales Agents
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ALUMINUM Ingots, Sheets Wire, Rods Castings
Aluminum Wire and Cables (bare and insulated) for Electrical Conductors.
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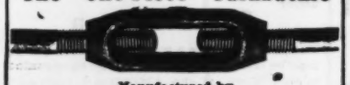
Branch Office: 11 Broadway, New York
CLEVELAND CITY FORGE & IRON CO.
CLEVELAND, OHIO

The "One-Piece" Turnbuckle



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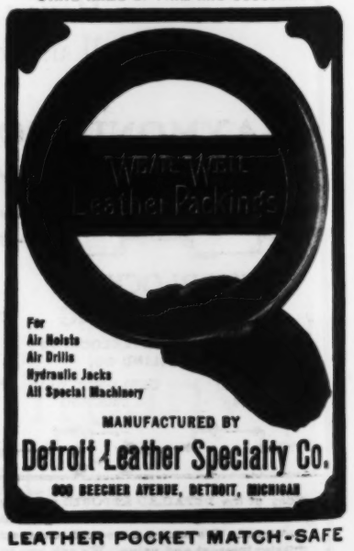

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Order through your bookseller, or copies will be forwarded postpaid by the publishers on receipt of the retail price.
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SEWERS, WATER PIPE AND APPURTENANCES.

Office of the Sewerage and Water Board.
No. 602 Carondelet Street,
New Orleans, La., Nov. 19, 1904.

Sealed proposals will be received until 12 o'clock noon of Tuesday, January 31, 1905, for the construction of 65 miles of sewers and appurtenances and the furnishing and laying of 15 miles of cast iron water mains and appurtenances, and 4,000 feet of railroad track.

The sewers will range in size from 8 to 30-inch, and in depth from 5 to 18 feet, and will include 700 manholes and 275 flush tanks.

The water pipe will be mainly from 16 to 48-inch in diameter, aggregating about 13,000 tons. Small quantities of 4 to 12-inch water pipe will also be included.

All quantities stated are approximate only.

The sewer work will be divided into four (4) contracts; there will be one contract for furnishing 48-inch cast-iron pipe and one for furnishing pipe smaller than 48-inch; also one contract for laying the 48-inch pipe and furnishing and laying the railroad tracks, and one contract for laying water pipe smaller than 48-inch.

A surety company bond for an amount equal to 25 per cent. of the gross amount of each contract will be required of the successful bidder in each case.

A certified check on a New Orleans bank for $1,500 must be deposited with the Secretary of the Sewerage and Water Board, not later than 11 A. M., January 31, 1905, by each bidder, and one for each contract bid upon.

After December 20, 1904, specifications, general plans and blank forms of proposals may be obtained at the office of the Board.

The right is reserved to reject all bids on either contract.

F. S. SHIELDS,
Secretary.
GEO. G. EARL,
General Superintendent. 21-10t

STREET RAILWAY FRANCHISE.

Shanghai, China.

The council invites tenders for the construction and operation of about 24 miles of electric tramways on the trolley system in the streets of the Settlement of Shanghai; alternative proposals are desired for single trolley and double trolley lines.

A proforma contract is open to inspection by tenderers, and copies will be supplied to applicants by the Council's agents:

London: Messrs. John Pook & Co., 63 Leadenhall St.

New York: Messrs. Fearon, Daniel & Co., 96 Wall St.

from whom further information may be obtained. While the conditions stated in the proforma contract are laid down for general guidance the council desires it to be expressly understood that they are open to such modification as tenderers may consider necessary.

A deposit of £5,000, or certified security to that amount, will be insisted upon, payable at date of signature of contract, and forfeit if the concession is not availed of.

Sealed tenders endorsed "Tender for Tramway Concession" must be sent to the Secretary, Municipal Council, Shanghai, and must be received on or before the 31st March, 1905. 16-6t—eow

DEPARTMENT OF THE INTERIOR, United States Geological Survey, Reclamation Service, Washington, D. C., November 28, 1904.—Sealed proposals will be received at the office of the United States Reclamation Service, Phoenix, Arizona, until 9 o'clock A. M., February 8, 1905, for the construction of a masonry dam and two bridges on Salt River, about 70 miles east of Phoenix, Arizona. The dam will contain about 300,000 cubic yards of masonry. Specifications, form of proposals and plans may be inspected at the office of the Chief Engineer of the Reclamation Service, Washington, D. C., or at the office of the district engineer of the Reclamation Service, Roosevelt, Ariz. Each bid must be accompanied by a certified check for $10,000, payable to the order of the Secretary of the Interior as a guaranty that the bidder will, if successful, promptly execute a satisfactory contract and furnish bond in the sum of $100,000 for the faithful performance of the work. The right is reserved to reject any or all bids, to accept one part and reject the other, and to waive technical defects, as the interests of the service may require. Bidders are invited to be present. Proposals must be marked: "Proposal for the construction of the Roosevelt Dam, Salt River, Arizona." E. A. HITCHCOCK, Secretary. 22-5t

ACHESON GRAPHITE

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Manufactured in the Electric Furnace. Write us for full information regarding the use of this material in high grade protective coatings.

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Open Hearth Steel Castings for locomotive, shipbuilding, electrical, pump and general machinery purposes. Subject to U. S. Government, Lloyd's, Railroad and other specifications. *Rail or Water Deliveries.*

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RIVETED STEEL PIPE For Water, Gas, Sewers, Culverts, Penstocks, Air and Hydraulic Mining, Bridge Caissons, Girders, Smoke Stacks, Cupolas, Stand Pipes. **TANKS**

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Cast Iron Pipe and Specials, Hydrants, Gates, Pig Lead, etc. **Akron Sewer Pipe** Lead Pipe, Plumbers' Material.

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PATENTS DESIGNS, TRADEMARKS, LABELS, COPYRIGHTS and Litigation affecting the same

TREASURY DEPARTMENT, Office of the Supervising Architect, Washington, D. C., December 19, 1904.—Sealed proposals will be received at this office until 3 o'clock P. M. on the 18th day of January, 1905, and then opened, for the low pressure steam heating apparatus complete in place, for the U. S. Post Office at Yankton, South Dakota, in accordance with drawings and specification, copies of which may be had at this office or at the office of the Superintendent at Yankton, South Dakota, at the discretion of the Supervising Architect. JAMES KNOX TAYLOR, Supervising Architect. 25-2t

PROPOSALS FOR BARGES AND BOATS, U. S. Engineer Office, Custom House, St. Louis, Mo., Dec. 5, 1904.—Sealed proposals, in triplicate, for furnishing wooden flat barges and wooden or steel flat boats, will be received here until 12 M., Jan. 4, 1905, and then publicly opened. Information furnished on application. THOS. L. CASEY, Major, Engrs. 23-4t

STONE.

Bids wanted for getting out 200 cubic yards stone per day for No. 6 Gates crusher. Quarry and plant furnished. Address "STONE," Engineering News. 25-4t

A postal will bring gratis DATA on **SHOVELS**

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Submarine Diver & Contractor
Pipe Laying Under Water a Specialty.
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43 AND 45 EAST NINETEENTH STREET, NEW YORK CITY

PUMPING ENGINES, BOILERS AND SMOKE STACK.

Muscatine, Ia.

Sealed bids will be received by the Board of Trustees of Water-Works of the City of Muscatine, Iowa, until 2 o'clock p. m. of the 3d day of January, 1905, for furnishing, erecting and connecting in a new pumping station, the following machinery, namely:

1. One pumping engine of a capacity of three, and one of five million gallons per 24 hours, together with a heater of 400 HP. condenser, auxiliary pumping engines, suction and force pipes inside building, all branch steam pipes, valves and specials.

2. Two return tubular boilers 6 feet in diameter and 16 feet long, erected and encased, the main steam pipes in the boiler and engine rooms. And a self-supporting steel chimney.

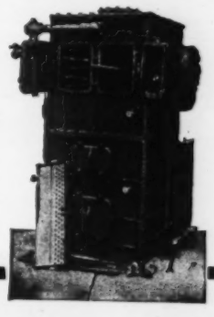
Proposals shall cover the construction of the foundations for boilers and chimney with cement, sand, broken stone and corrugated steel rods, furnished by the said Board of Trustees.

Proposals shall be made independently upon the material described in each of the two above items, in accordance with plans and specifications on file with Wm. Molis, Superintendent of Water-Works, which will be furnished upon application.

All bids must be accompanied by a certified check in the sum of One Thousand ($1,000.00) dollars, made payable to W. L. Roach, President of the Board of Trustees of Water-Works, as a guarantee that the bidder will enter into a contract if it be awarded to him. Said bids shall state period of time required for construction and installation.

The right is reserved to the said Board of Trustees to waive any informalities, to reject any or all bids, or to select the one which to said Board of Trustees appears the most desirable.

T. R. FITZGERALD,
Secretary Board of Trustees of Water-Works.
WM. MOLIS, Superintendent. 23-4t



COCHRANE HEATERS

A large electric light and power plant recently bought a Cochrane Heater.

They were running compound condensing and developing horse-power at the engine with sixteen pounds of steam per horse-power per hour.

They decided to use the exhaust steam from their auxiliaries in a Cochrane Feed Water Heater, after first heating the water as high as possible with exhaust steam from the condensing engines.

They figure out that they get better results with this arrangement than they could when running everything condensing and have practically demonstrated the correctness of this theory.

They decided to use a Cochrane Open Feed Water Heater instead of a closed heater because they could save all the drips and get a much higher average temperature than they could with a closed heater (a Cochrane Separator—which is attached to every Cochrane Heater—thoroughly removes the oil from exhaust steam before this steam comes in contact with the water to be heated), and lastly they selected a Cochrane Heater because the superior economy resulting from its use counts largely when coal is high in price—costing between five and six dollars a ton—as is the case in many sections of the country.

You could probably use a Cochrane Heater to equally good advantage.

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Manufacturers of

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They wear longest, go furthest, look best.

We want all fair-minded users to try "Coverall" Paints, to try the best at our expense. We will send a barrel of **"2000 COVERALL BLACK"** to anyone who is not on our books, with this stipulation: If you find after using ten gallons that it isn't worth the price, and that it is not better value at the price than what you are now using, send back the other forty gallons at our expense.

If you are satisfied, entirely satisfied, pay us for the forty gallons only. The price is $1.25 per gallon, freight prepaid.
Positively only one barrel to one customer on this offer.
If you don't use black paint, write us for prices on red and brown.

CLEMENT "COVERALL" COMPANY
307 Builders' Exchange, Philadelphia, Pa.

SEWERS.

Mamaroneck, N. Y.

Sealed proposals for the construction of sewers will be received by the Board of Trustees of the Village of Mamaroneck, N. Y., at the office of the Village Clerk until 5 o'clock, P. M., the 4th day of January, 1905.

Approximately two miles of sewers are to be laid.

Each bid must be accompanied by a certified check for a sum equal to 5 per cent. of the amount of the bid.

A surety company bond for an amount equal to 50 per cent. of the bid will be required.

The Board of Trustees reserves the right to reject any and all bids.

Plans and specifications may be seen and bidding forms obtained at the office of the Village Clerk, Mamaroneck, N. Y., or at the office of the Engineer, No. 5 Court Street, White Plains, N. Y.

DANIEL WARREN, President.
CHARLES W. BUCKTER, Clerk.

Dated, Mamaroneck, N. Y., Dec. 7, 1904.
24-3t

SEALED PROPOSALS, in duplicate, will be received at the office of the Isthmian Canal Commission, Washington, D. C., until 10.30 o'clock A. M. on the 16th day of January, 1905, at which time they will be opened in public, for furnishing "Dynamite and Explosives." Proposals will be addressed in sealed envelopes to "J. G. Walker, Chairman Isthmian Canal Commission, Washington, D. C." Proposal blanks and specifications may be obtained at the office of the Isthmian Canal Commission, Washington, D. C. 24-5t

DEPARTMENT OF THE INTERIOR, U. S. Geological Survey, Washington, D. C., November 17, 1904.—Sealed proposals will be received at the office of the Chief Engineer of the Reclamation Service, U. S. Geological Survey, Washington, D. C., until 2 o'clock P. M., January 9, 1905, for the construction of an outlet tunnel about 125 square feet cross-section and about 500 feet long, and two vertical shafts, in solid granite, to serve as a diversion tunnel for the Pathfinder Dam about fifty miles southwest of Casper, Wyoming, on North Platte River. Forms of proposal, plans, and specifications may be seen at the office of the Chief Engineer, Washington, D. C., or at the office of the United States Reclamation Service, Chamber of Commerce Building, Denver, Colorado. Each bid must be accompanied by a certified check for $1,000, payable to the order of the Secretary of the Interior, as a guaranty that the bidder will, if successful, promptly execute a satisfactory contract and furnish bond in the sum of twenty per cent. of the contract price for the faithful performance of the work. The right is reserved to reject any or all bids, to accept one part and reject the other, and to waive technical defects as the interest of the service may require. Proposals must be marked "Proposals for Pathfinder Tunnel, North Platte Project." Bidders are invited to be present. THOS. RYAN, Acting Secretary. 21-6t

Municipal Civil Service Commission,
61 Elm St., New York City,
Dec. 16, 1904.

Public notice is hereby given that an open competitive examination will be held for the position of Topographical Draughtsman on Tuesday, January 10, 1905, at 10 A. M. Receipt of applications will close on December 30, at 4 P. M. For scope of examination and further information apply to the Secretary of the Commission.

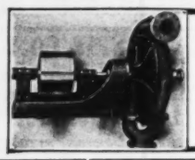
BIRD S. COLER, President,
R. ROSS APPLETON,
ALFRED J. TALLEY,
Commissioners.
HENRY BERLINGER,
Secretary. 25-2t

THE LOETZER AUTOMATIC AIR AND VACUUM VALVE is the best on the market

Its action is automatic and positive. Suited for all pressures, and requires no adjustment. When filling the mains this Valve will automatically exclude all air from same and prevent air-cushion; when emptying the mains it will automatically allow air to enter and prevent vacuum.

Used by the Penn. R. R. Co., Penn. Water Co., and others

THE LOETZER VALVE & MFG. COMPANY, Towanda, Penna.



The "VORTEX" Centrifugal Pumps

Perfected Design Improved Construction

LAWRENCE PUMP & ENGINE COMPANY
LAWRENCE, MASS.

BRIDGE.

Springfield, Mass.

Sealed bids for removing and rebuilding portions of the piers and abutments of the bridge over the Connecticut River between Chicopee and West Springfield will be received by the County Commissioners of Hampden county, Massachusetts, at their office at the court house, in Springfield, until twelve o'clock M., January 11, 1905.

The work will include the construction of about 1,500 yards of stone and concrete masonry.

Plans, specifications and form of contract can be seen at the office of the Clerk of Courts, at the court house, Springfield, Mass.

The said Commissioners reserve the right to reject any or all bids and to award the contract as it deems for the best interest of Hampden county.

By order of the County Commissioners.
ROBERT O. MORRIS,
Clerk.
Springfield, Mass., December 19, 1904. 25-2t

ELECTRICAL TOWING.

There will be a meeting of the sub-committee of the Commission authorized by a concurrent resolution of the two houses of the Legislature, of the Session of 1904, and appointed to investigate electrical towing systems applicable to the canals of the State of New York, held at the Murray Hill Hotel, New York City, Thursday, January 5th, 1905, at eleven o'clock A. M., at which time the Committee will receive plans and systems or devices, with their claims, for electrical towing on the enlarged canals of the State of New York.

It is requested that persons desiring to be heard at that time notify the Chairman, Elmer L. Corthell, at his office, No. 1 Nassau Street. 25-2t

BRIDGE.

Office of the Board of Public Works,
Oshkosh, Wis., Dec. 16, 1904.

Notice is hereby given that sealed proposals will be received at this office until Saturday, January 14, 1905, at 12 o'clock noon, for the furnishing of all material and labor for the construction and erection of the superstructure of the proposed bridge over Fox River connecting Main St. and South Main St., Oshkosh, Wis., according to plans and specifications on file in the office of the city clerk. Forms for proposals will be furnished on application to Karl L. Lehmann, consulting engineer, 910 Opera House Building, Chicago, Ill.

The right is reserved to reject any and all bids.

M. COFFEY,
FRED BEDUHN,
E. S. HINMAN,
25-3t Board of Public Works.

DEPARTMENT OF THE INTERIOR, Washington, D. C., December 19, 1904.—Sealed proposals will be received until 10 o'clock A. M., January 10, 1905, at the office of the Chief Engineer of the Reclamation Service, United States Geological Survey, Washington, D. C., for the furnishing of 2,000 barrels, more or less, of Portland Cement, to be delivered at Roswell, New Mexico. Particulars may be obtained by applying to W. M. Reed, United States Geological Survey, Roswell, New Mexico, or to the Chief Engineer of the United States Reclamation Service, Washington, D. C. Each bid must be accompanied by a certified check drawn to the order of the Secretary of the Interior for 2 per cent. of the contract price, as a guaranty that the bidder will, if successful, promptly execute a satisfactory contract, and furnish bond in the sum of 20 per cent. of the contract price for the faithful performance of the work. The right is reserved to reject any and all bids, to accept one part and reject the other, and to waive technical defects as the interests of the service may require. Bidders are invited to be present. Proposals must be marked: "Proposal for cement, Hondo Project, New Mexico." E. C. HITCHCOCK, Secretary. 25-3t

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Sharp Dumping Angle

Pivoted Automatic Side Boards

Wide Opening for Discharge

White Oak Lumber in Beds

Chilled Wheels

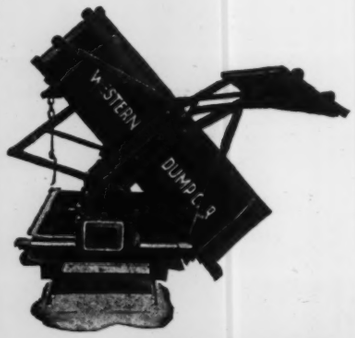
Bronze Bearings

They stick to the track

All sizes up to 10 yds.

All gauges

Ready for loading by hand. Note the low lift for the shovelers.



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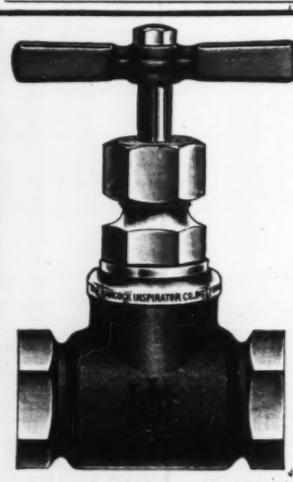

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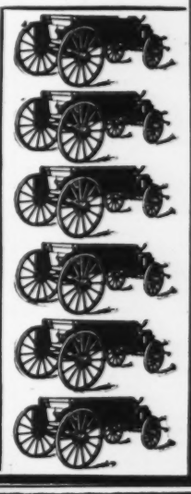
A Dump Wagon must be able to withstand unusual jolts, jars and strains. Strength and durability are mighty important factors in Dump Wagon construction. You know that — so do we.

Watson Dump Wagons



Are famed for their years of service. The bodies are of Adirondack Birch which has proved to be best adapted for the rough usage such a wagon is bound to have. Some Watson Wagons have been in continuous service for 20 years. That's a record that tells the story of durability.

"Watson Facts" tells a story of superiority.

Watson Wagon Co.

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"A new 'promised land.'"

SALT LAKE

IN WINTER

In the valley of the Jordan which traverses a new promised land, sits the gem of Utah — Salt Lake City. The climate is delightful, the city is of unusual interest, and a visit is always enjoyable. It can best be reached by the

NEW YORK CENTRAL LINES

and their connections.

A copy of No. 5 of the "Four-Track Series," "America's Winter Resorts," will be sent free to any address, on receipt of a two-cent stamp, by George H. Daniels, General Passenger Agent, New York Central & Hudson River Railroad, Grand Central Station, New York.

"WANT"

Advertisements in ENGINEERING NEWS cost 1½ cents a word an insertion for "Situations Wanted" and 3 cts. a word for "Situations Open" and "Miscellaneous Wants." Read them weekly as they will help you.

STEEL BRIDGE.

Dayton, O.

Sealed proposals will be received at the office of the Clerk of the Board of Public Service of the City of Dayton, State of Ohio, until 12 o'clock, noon, Friday, January 6, 1905, for the construction of the steel superstructure for the bridge across the Great Miami River at Herman Ave.

The bridge will consist of 5 spans from 132 to 189 feet in length; roadway to be 20 feet wide in the clear; two sidewalks, 6 feet wide each. The bridge to be proportioned to carry, in addition to the dead load, the following live loads: A live load of 100 pounds per square foot of roadway and 80 pounds per square foot of sidewalks; a concentrated moving load of one steam road roller weighing 30,000 pounds, arranged as follows: 13,000 pounds on forward roll and 8,500 pounds on each rear roll; axles 11 feet apart, forward roll 4 feet face, rear rolls each 20 inches face and 5 feet center to center.

Bidders shall submit with their proposals complete strain sheets, plans of the proposed bridge, and such detail drawings as will clearly show the dimensions of all parts, mode of construction, and the sectional area; also the dead weight assumed in the calculations. Bidders shall submit two bids with plans, one for the roadway paved with brick and the sidewalks with cement, the other for a plank floor on steel joist for both roadway and sidewalks.

The bridge shall be designed and proportioned in accordance with Theodore Cooper's latest specifications for highway bridges.

Profile of the location of the proposed bridge, with other information, may be obtained by applying to F. M. Turner, City Engineer, Dayton, O.

Bids will also be received at the same time for the re-erection of the old Main Street bridge and one span of the Third Street bridge at the same site, the work to be done in accordance with the specifications on file in the office of the City Civil Engineer.

All bids must be upon the printed forms prepared for the purpose, which may be obtained of the City Civil Engineer, and enclosed in a sealed envelope directed to the Board of Public Service, Dayton, Ohio, and endorsed on the outside of the envelope. "Proposals for Herman Ave. Bridge, Dayton, Ohio."

The bond required of the successful bidder shall be in the sum of 50 per cent. of the contract price, and must be given by residents of Montgomery County, Ohio, or said bond may be otherwise secured in a manner satisfactory to the Board of Public Service by whom said bond must be approved.

Each bid shall contain the full name of every person or company interested in same and shall be accompanied by a sufficient bond or certified check upon some solvent bank for a sum equal to five (5) per cent. of the amount of the bid submitted, that if the bid is accepted, a contract will be entered into and the performance of it properly secured.

All prices must be written in words and also stated in figures. The contractor shall state the prices for material and labor separately.

The place of residence of each bidder must be given after his signature, which must be written in full. When firms bid, the individual names of the members shall be signed in full, and the firm name added.

The Board of Public Service reserves the right to reject any or all bids, or waive defects in bids in the interest of the city, and the right of awarding the contract for either kind of flooring and for either the new bridge or for erecting the old bridge.

By direction of the Board of Public Service. LOUIS HAAS, President.
WM. F. MILLER, Clerk. 24-2t-eow

DITCHING.

Sidney, Ia.

Sealed proposals addressed to the Board of Supervisors of Fremont County, Iowa, will be received at the Auditor's Office until 12 o'clock, noon, of January 4th, 1905, for the construction of the Mule Slough Improvement Ditch and Spur Ditches thereto, consisting of 122,000 cu. yds. of excavation. Also, for the construction of the County Improvement Ditch, consisting of 40,000 cu. yds. A certified check for ten (10) per cent. of the amount of the bid to accompany each bid. The successful bidder to execute a proper bond in 25 per cent. of the estimated cost. Plans profiles and specifications are on file in the Auditor's Office. J. D. McKEAN, Auditor. 26-1t

BOILER, HEATER, PUMP, ETC.

Spring Lake, N. J.

Sealed proposals will be received Jan. 10th 1905, by the Engineer of Borough, Spring Lake, N. J., for furnishing and installing 150-HP. marine type boiler, air compressor, feed-water heater, boiler feed pump, steam separators, etc., in power house at Spring Lake. Specifications can be obtained from Chief Engineer, Borough Spring Lake. 26-2t

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The best known, most used, longest lived Roofing Tin on the market. Send for a sample and see it for yourself. Address Advertising Department.

American Sheet & Tin Plate Company

Frick Building, Pittsburg, Pa.

BERMUDEZ ASPHALT-WARNING.

TO MUNICIPAL AUTHORITIES, CONTRACTORS, AND ALL PERSONS USING OR CONTEMPLATING THE USE OF BERMUDEZ ASPHALT:

NOTICE is hereby given to municipal authorities, contractors, and all persons using or contemplating the use of Bermudez asphalt, that the New York & Bermudez Company, owner of Bermudez Lake, in the State of Bermudez, United States of Venezuela, from which said Company was wrongfully dispossessed on the 22d of July, 1904, will hold liable in damages all persons whomsoever who, during such period as the Bermudez Lake shall continue in the wrongful possession of others, shall receive, use, purchase, sell or dispose of or be directly or indirectly concerned in the receipt, use, purchase, sale or disposition of any asphalt taken from said Bermudez Lake by persons other than the Company's duly authorized agents and employees. All persons concerned or in any way implicated as parties or accessories in said unlawful seizure, or any subsequent unauthorized traffic in the product of the Company's property will be held to strict legal accountability. NEW YORK & BERMUDEZ COMPANY, by CLYDE BROWN, Secretary. Land Title Building, Philadelphia, Pa., December, 1904. 26-3t oam

OFFICE CONSTRUCTING QUARTERMASTER, Cheyenne, Wyo., Dec. 28, 1904.—Sealed proposals, in triplicate, subject to the usual conditions, will be received at this office until 2 o'clock, p. m., Jan. 28, 1905, and then publicly opened, for furnishing and installing electric light fixtures, etc., in one Post Exchange and Gymnasium at Fort D. A. Russell, Wyo. Full information furnished on application to this office. The United States reserves the right to accept or reject any bid received or any part thereof. Envelopes containing proposals to be endorsed "Proposal for electric light fixtures at Fort D. A. Russell, Wyo.," and addressed to CAPTAIN W. S. SCOTT, Quartermaster, U. S. A., in charge of construction, Cheyenne, Wyo. 26-4t

WATER-WORKS AND SEWERAGE.

Louisburg, N. C.

Up to 5 o'clock, p. m., of Monday, January 15, 1905, sealed bids for the construction of water-works and sewerage will be received by the Committee on Water-works and Sewerage of the town of Louisburg, N. C. All bids must be accompanied by certified check for five per cent. of amount of bid. The right to reject any and all bids is reserved. For plans, specifications, and general information, address T. H. LACY, Secretary, Louisburg, N. C. 26-2t

TREASURY DEPARTMENT, Office of the Supervising Architect, Washington, D. C., December 24, 1904.—Sealed proposals will be received at this office until 3 o'clock p. m. on the 7th day of February, 1905, and then opened, for the construction complete of the U. S. Post Office at Nevada, Missouri, in accordance with the drawings and specification, copies of which may be had at this office or at the office of the Postmaster at Nevada, Mo., at the discretion of the Supervising Architect. JAMES KNOX TAYLOR, Supervising Architect. 26-2t

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The "Triplex"

Block saves time, hard work and money — let it make things move easily for you.

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The ROBINSON CLAY PRODUCT CO. of New York
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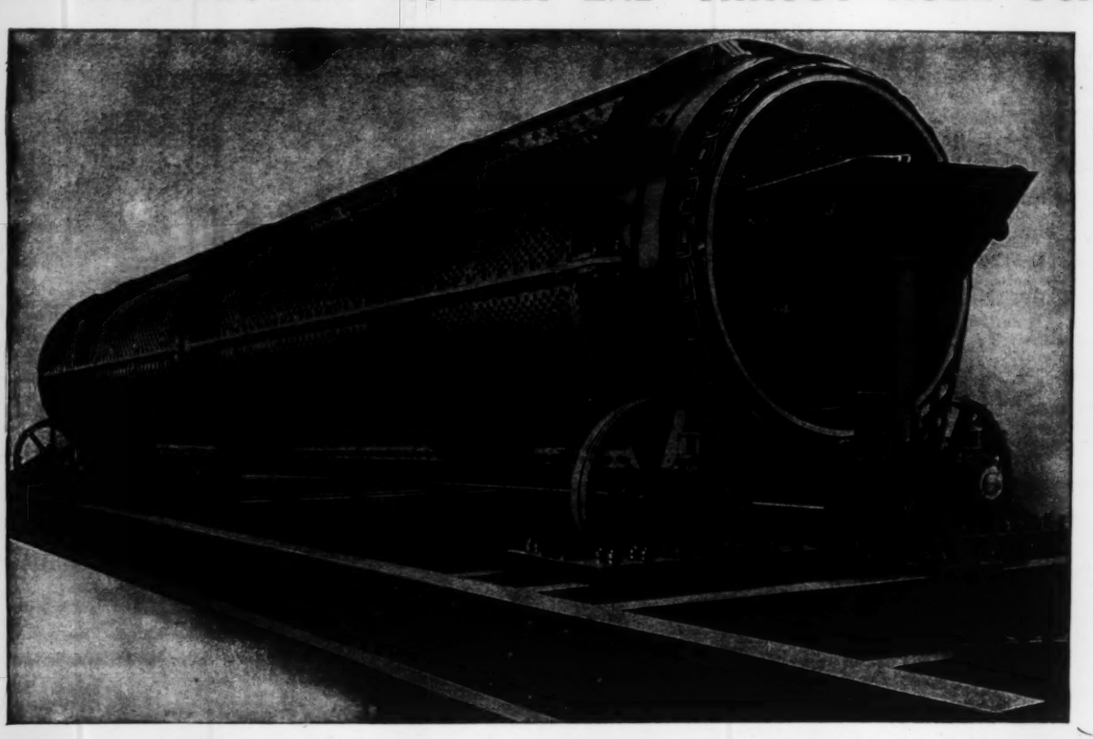
PHILADELPHIA, PA.

For other Proposal Advertisements see pages 35, 36, 37, of Advertisements and Construction News page 310.

MANGANESE STEEL REVOLVING SCREENS

PATENT ANTI-FRICTION ROLLER END THRUST ROLL SCREENS

Screen Always in Order—Ready to Run and Stone Evenly Sized to Specification



Run for Years Without Elongation of Holes or Expenditures for Repairs and Renewals

Anti-Friction Roller End Thrust Roll Screens **of Hadfield Manganese Steel.** It will pay you to investigate why screens of other makes are replaced by ours

NO BREAKDOWNS • LOSS OF OUTPUT SAVED • SCREENS RUN WHOLE SEASONS WITHOUT REPAIRS AND RENEWALS

CUT SHOWS

Largest Revolving Screen in the World

in operation at DELAWARE RIVER QUARRY AND CONSTRUCTION CO., LAMBERTVILLE, N. J., delivering stone into bins spanning four standard gauge tracks. Actual inside diameter of screen, 60 1-2 inches. Overall length of screen, cylinder, 42 ft., 6 5-8 ins. Overall length of frame, 58 feet. Dust Jacket (not shown) 80 ins. inside diameter, 8 ft. long.

Power Transmission Gearing—Sprocket Wheels Chain—Chutes—All of Manganese Steel

WILLIAM FLINN, Chairman.
GEO. H. FLINN, Sec'y & Treas.

Booth & Flinn, Limited,
Contractors.

GENERAL OFFICES:
1942 FORBES STREET

Pittsburgh, November 21, 1904.

Taylor Iron & Steel Co.,
Mr. Volney W. Mason, Jr., Engineer,
253 Broadway, New York City.

Gentlemen:

In reply to your inquiry regarding screens, will say that the screens you furnished us for our Packsaddle and Childs Quarries are giving us entire satisfaction. We have had a greatdeal less trouble with your materials and the cost of repairs have been a great deal less since using your screens. We have always found Manganese Steel is preferable in every case where wear and tear is excessive.

Yours truly,
Auditor.

THE TOMKINS COVE STONE CO.
TOMKINS COVE, N.Y.

Taylor Iron & Steel Company,
Mr. Volney W. Mason Jr., Engineer,
253 Broadway, N. Y.

November 14th, 1904.

Dear Sir:-

The order which we have just placed with you for a twenty foot manganese screen will make the fifth which the Taylor Iron & Steel Company have built for us. The first one, also twenty feet long and sixty inches in diameter was furnished us in February, 1898, and has run continuously for seven years, except while our plants have been shut down in the Winter for repairs. More than a million cubic yards of stone have passed through this screen over the same plates, which are still in good condition. The repairs have not exceeded, altogether, twenty dollars. The other screens furnished us in 1898, 1900 and 1903, have been equally satisfatory. There have been no renewals and practically no repairs.

Very truly yours,
The Tomkins Cove Stone Company,
Waller Tomkins
President.

New Improved Geared Elevators for Chain or Belt. Plans for Complete Crushing Plants.

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New York Office, 253 Broadway

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Sewer and Subway Manhole Castings

Sewer Catch-Basin Castings, Etc. TO ORDER

Prompt Shipments
Deliver at any Point.
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Iron Foundry

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Noiseless
Manhole Covers
Sewer and Park Castings
In Stock and to Order
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Lampholes
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Gutter Crossings, Catch Basins, etc.

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THE DUNN EXTENSIBLE TRENCH BRACE

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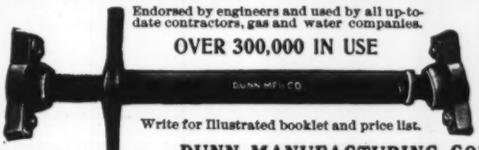
Endorsed by engineers and used by all up-to-date contractors, gas and water companies.

OVER 300,000 IN USE



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P. H. & J. CONLAN

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Contractors for Drilling
Water, Oil or Gas Wells
To
5,000 FEET

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Test Borings for Water or foundations.

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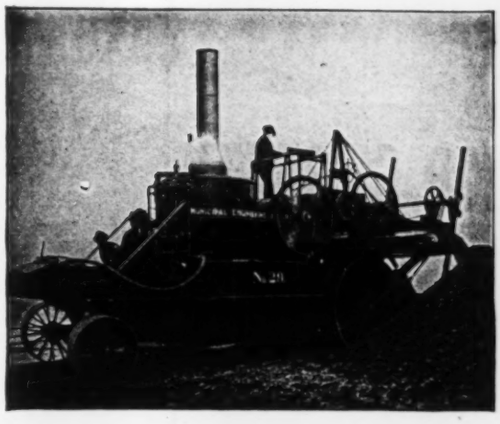
The ENGINEERING NEWS PUBLISHING COMPANY
220 BROADWAY, - - NEW YORK

Sewer Contractors' Attention!



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Plans, Specifications and Estimates Furnished for the Septic Tank System of Sewage Disposal (Patented)

No Chemicals. No Sludge.
Low Cost in Construction.
Nominal Annual Expenditure.
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PATENTS THE PROCESS OF SEPTIC TREATMENT IN OPEN or CLOSED TANKS
Fittings and Apparatus for same
Automatic alternating gear for filters

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DIAPHRAGM PUMPS

Capacity, 4,000 gallons per hour

For Sewer Departments, Water-Works Railroads and Foundation Builders

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160 Commercial Street, Boston, Mass.

Also, Lockport, N. Y.

Hawkeye Grub and Stump Machine

Works on standing timber or stumps. Clears three acres at a sitting. Two horses develop the power of 144 horses. Used by hundreds of contractors.

C. D. SMITH & CO., General Contractors
Main Office, 280 Front St.

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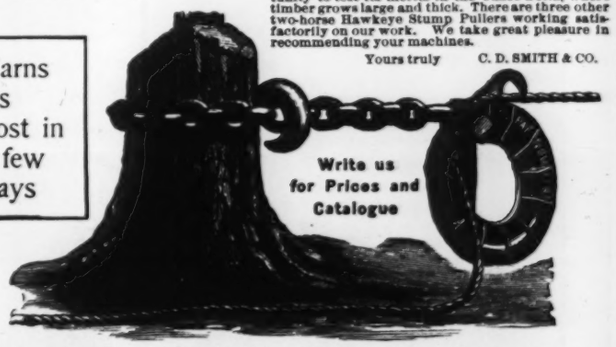
Yours truly C. D. SMITH & CO.

Earns its cost in a few days



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Get Our Prices on Manhole Castings Machinery Castings and Pattern Work a Specialty

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Principal Assistants
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Dean & Main.
Mechanical & Mill Engineers.
Exchange Building, 53 State Street.
Boston, Mass.

Feb. 17, 1904.

Mr. Frank B. Gilbreth,
176 Federal Street, Boston, Mass.

Dear Sir:--

We wish to express our satisfaction with the manner in which you have executed your contract for the construction of the factory for the Columbian Rope Company, Auburn, N. Y.

The date on which we made an examination of the site was March 18, 1903. The boilers, engine and shafting will be running today, and we expect that there will be some product from the factory before March 1, 1904.

Considering the size of this plant and the number of buildings, we consider less than eleven months a short period of time in which to design, build and get it into running condition.

Although the work has been done expeditiously, it has not been slighted and does not show any signs of rush work.

Very truly yours,

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(C. T. M.)

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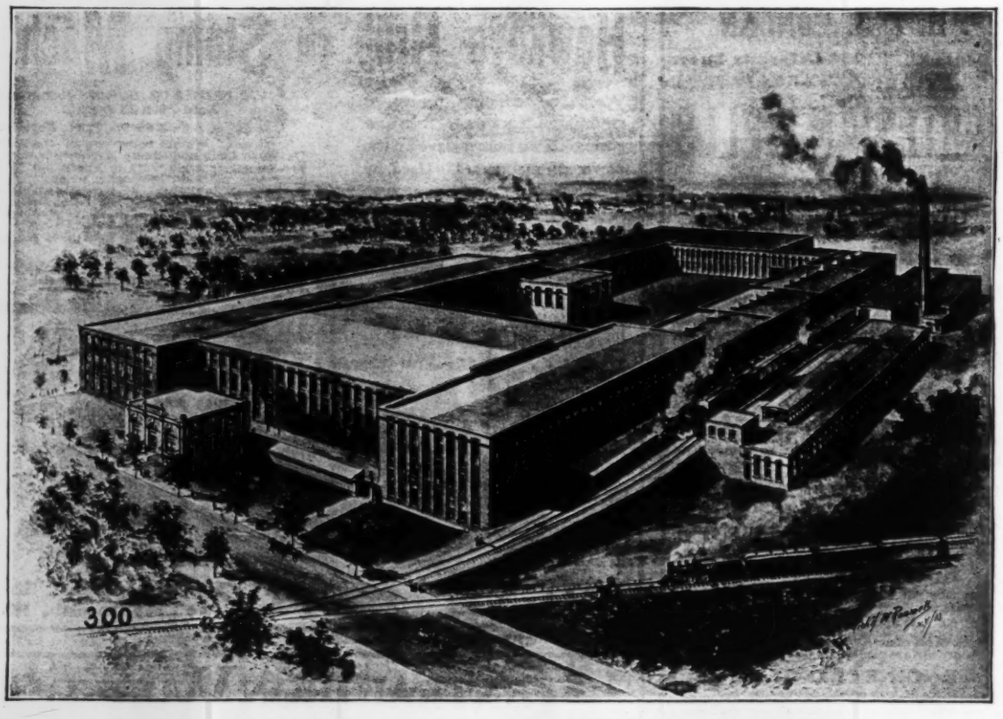

NEW PLANT OF THE COLUMBIAN ROPE CO., AUBURN, N. Y.

PLANT COVERING
TEN ACRES
DESIGNED, BUILT
AND IN
RUNNING ORDER
IN LESS THAN
ELEVEN MONTHS

AUSTIN MACHINERY GIVEN HIGHEST AWARDS OVER ALL COMPETITORS

TWO GRAND PRIZES
THREE GOLD MEDALS
AT
WORLDS FAIR
ST. LOUIS
1904

AUSTIN MANUFACTURING CO.
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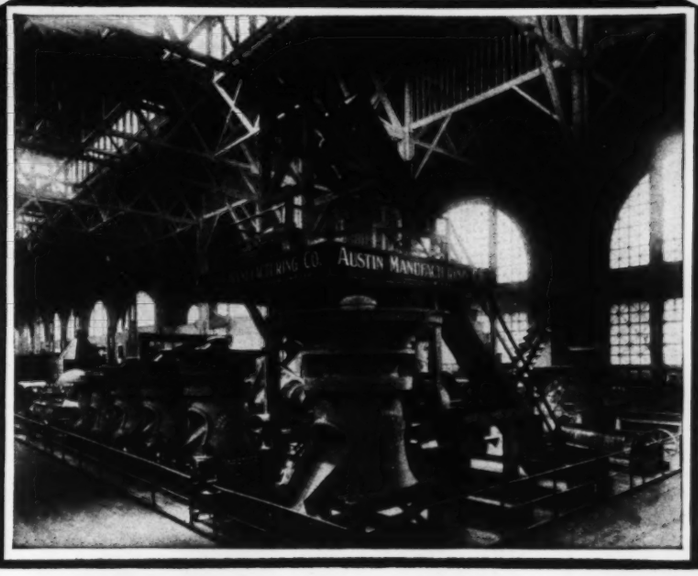

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in the
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DERRICKS, STEEL, WOOD OR PIPE
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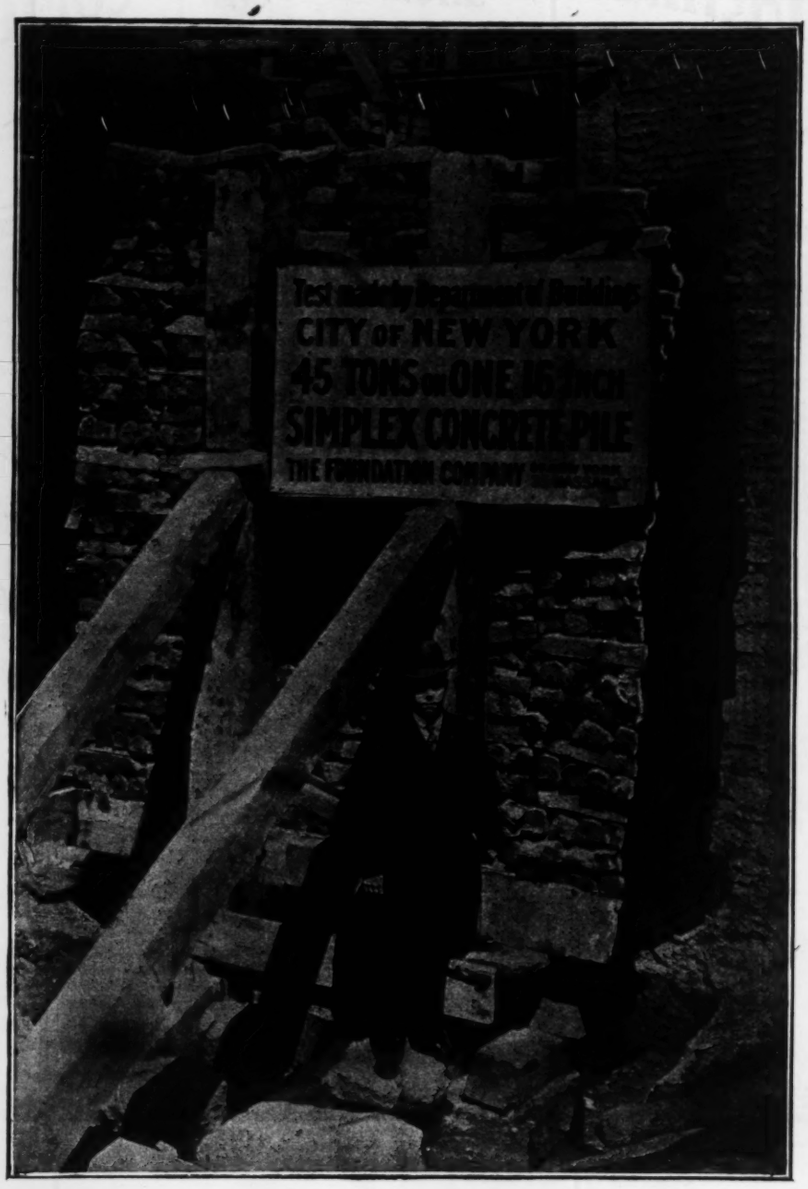

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For Water, Oil or Gas Wells
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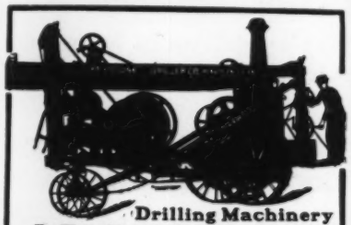
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The Acme Water Storage System
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Provides a means of water storage for general use and fire extinguishment. Greater safety; higher economy and efficiency; better sanitary conditions obtained by use of this system.
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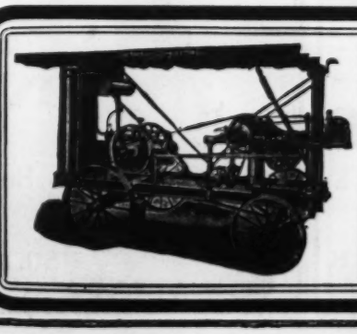
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KITSON LIGHT

Cheapest Light of Equal Candle Power in the World

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One gallon of kerosene oil burns for eleven hours.

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Simple to operate.
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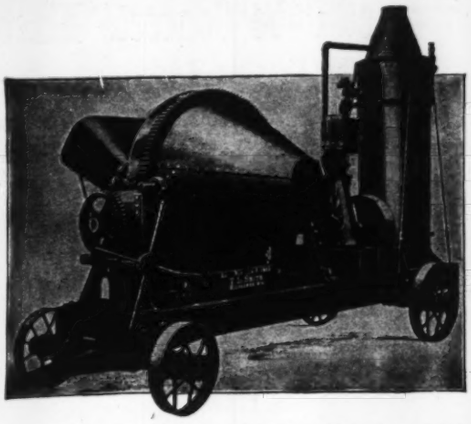

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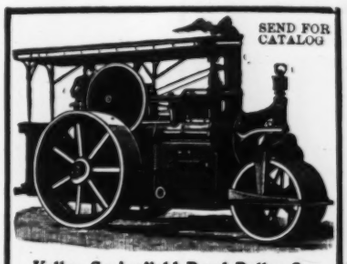

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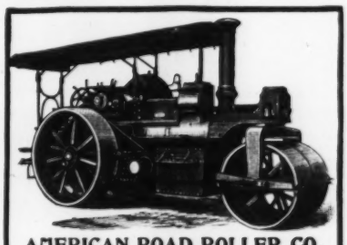

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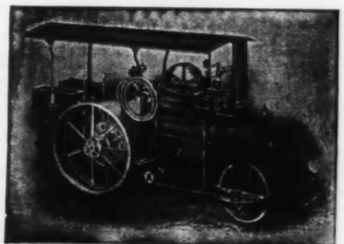

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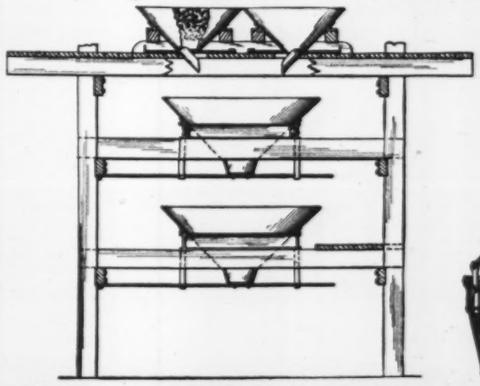

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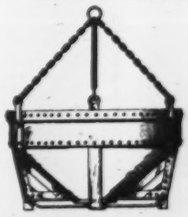

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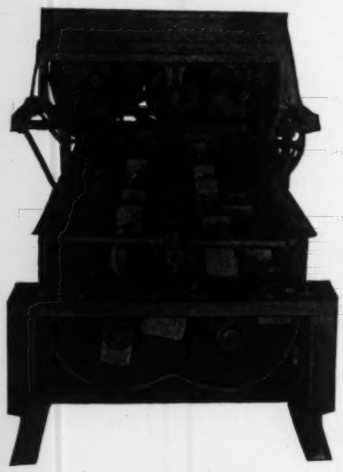

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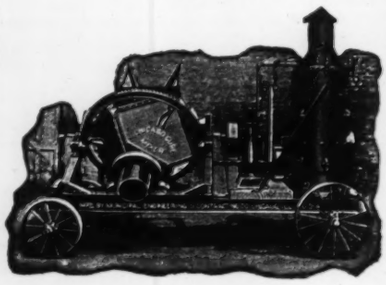

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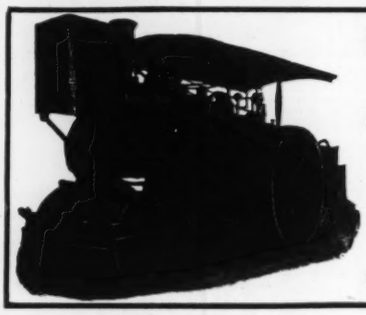

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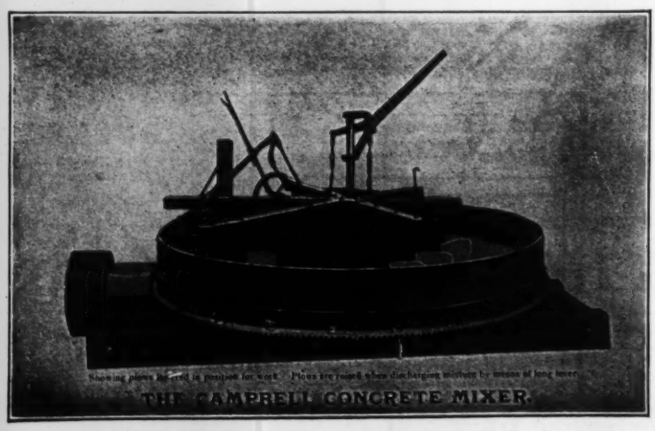

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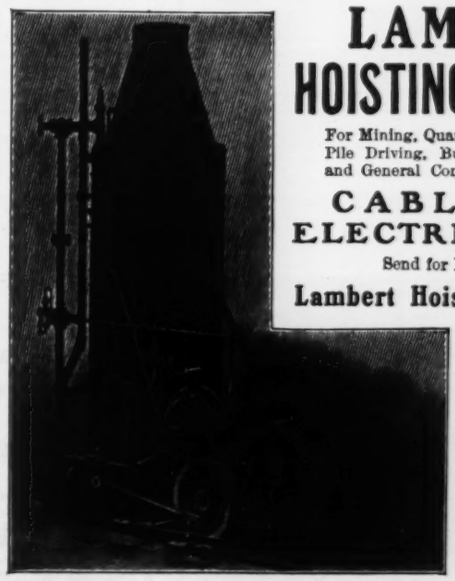

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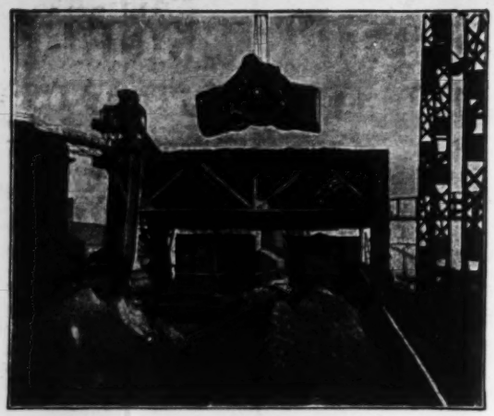

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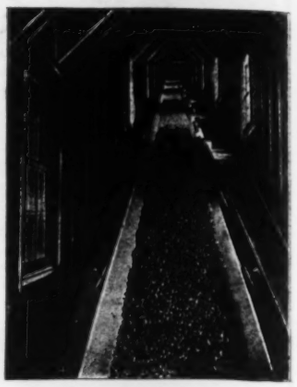

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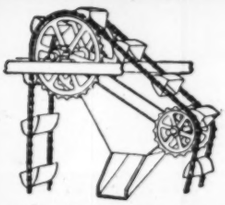

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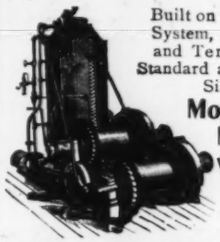

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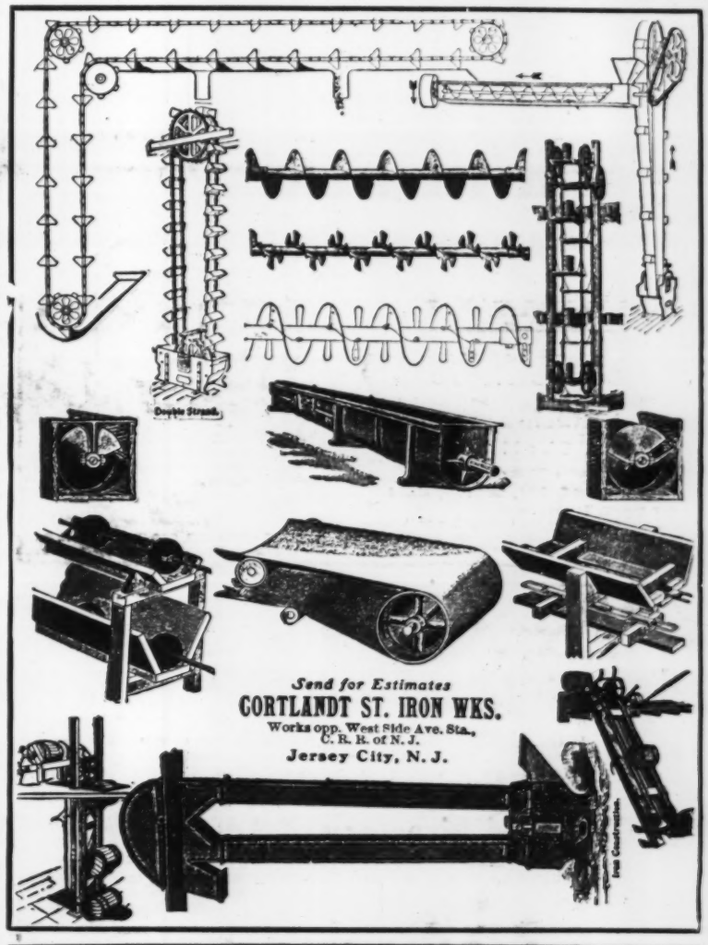

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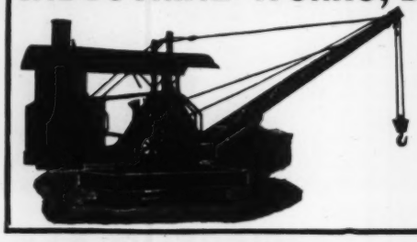

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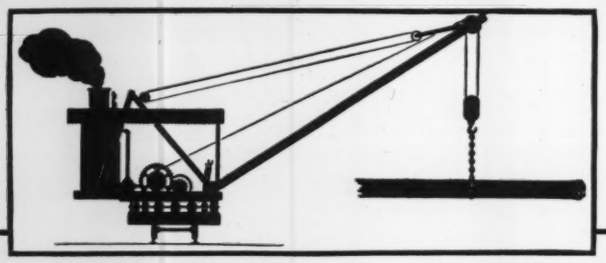

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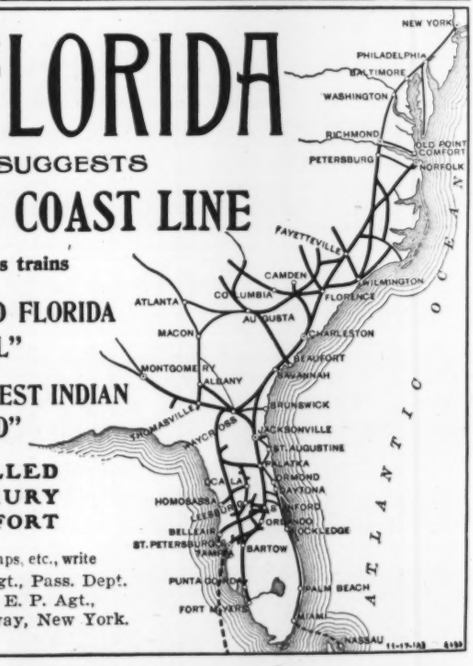

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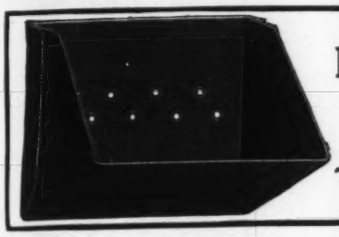

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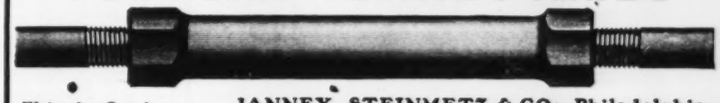

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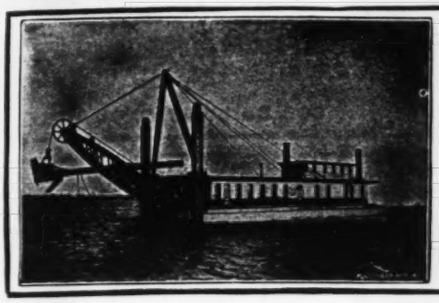

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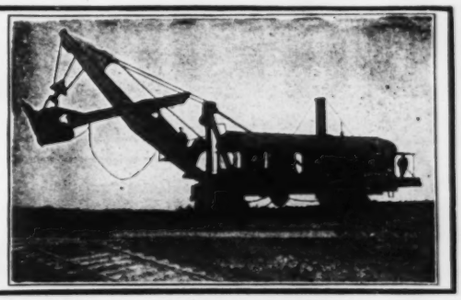

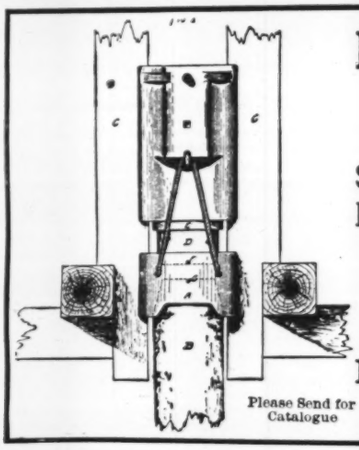

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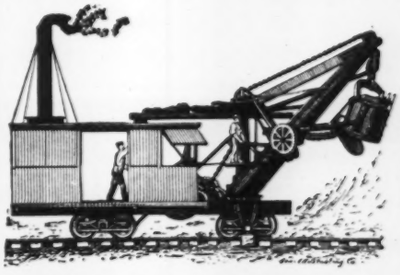

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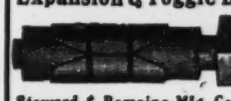

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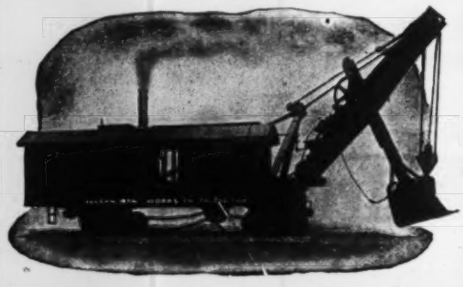

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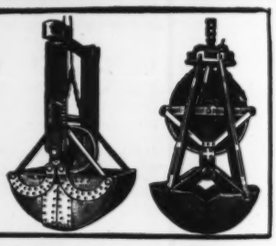

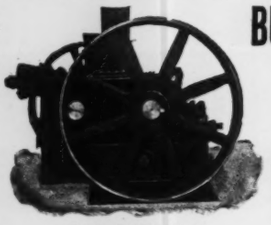

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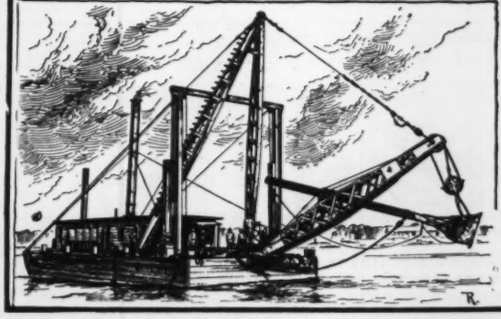

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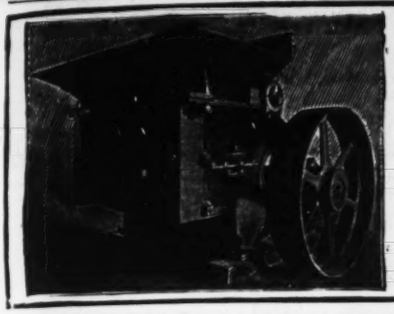

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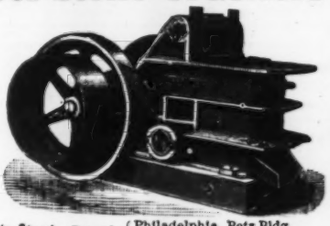

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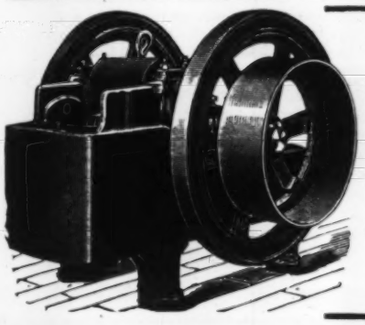

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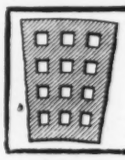

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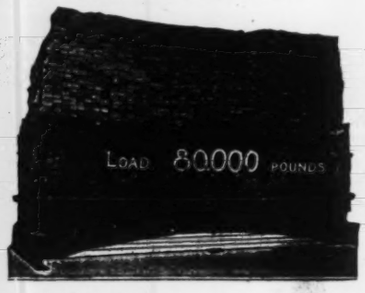

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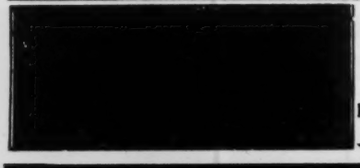

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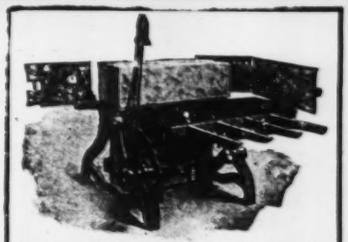

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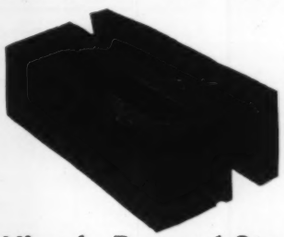

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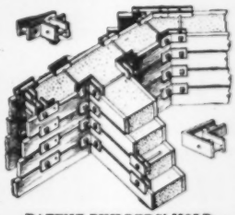

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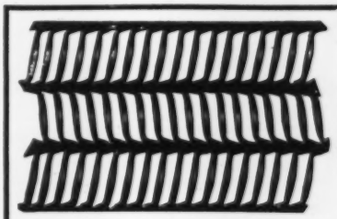

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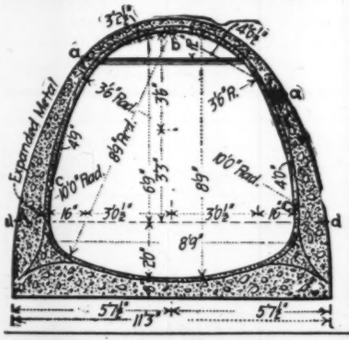

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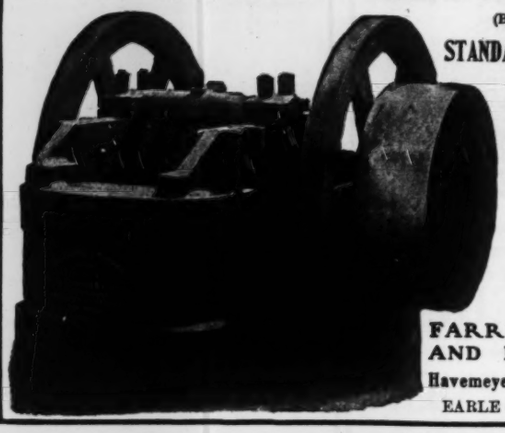

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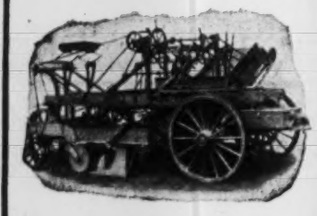

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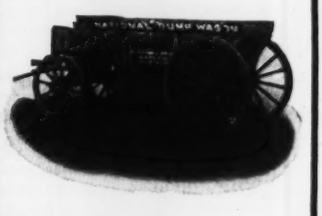

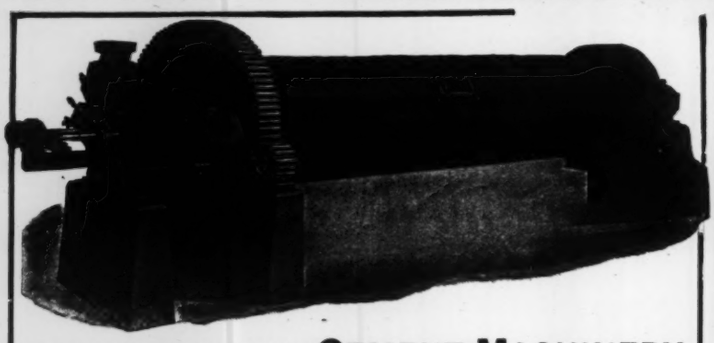

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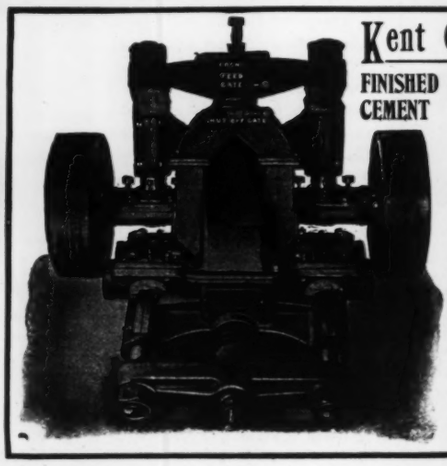

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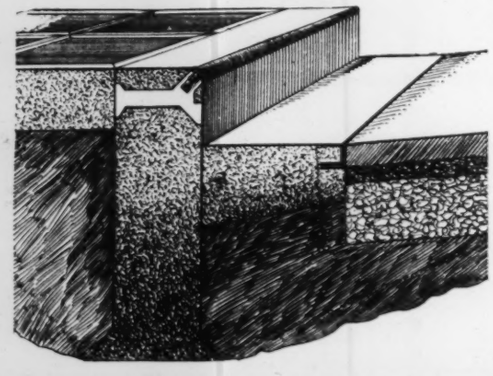

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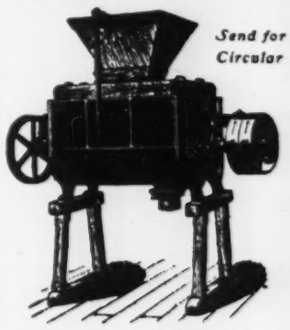

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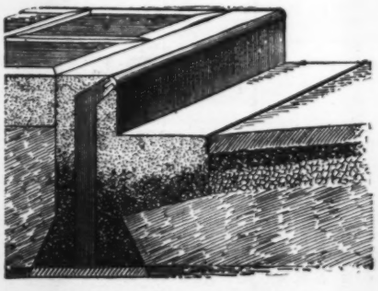

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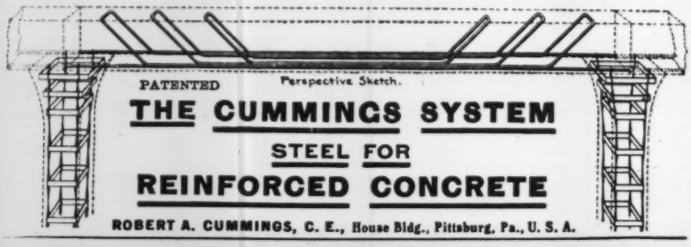

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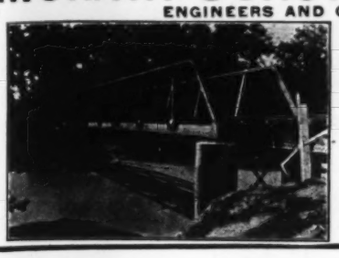

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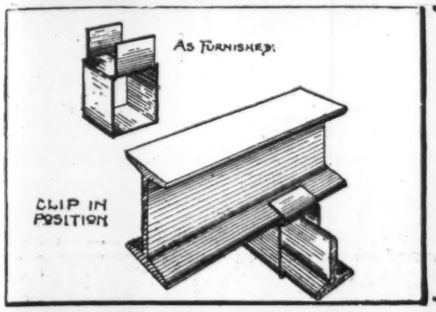

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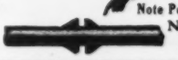

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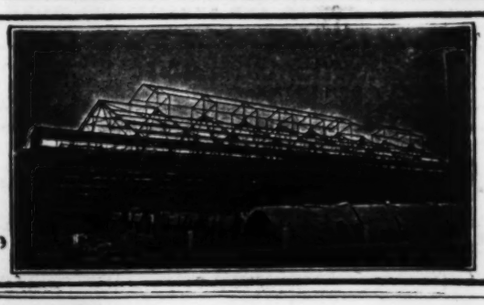

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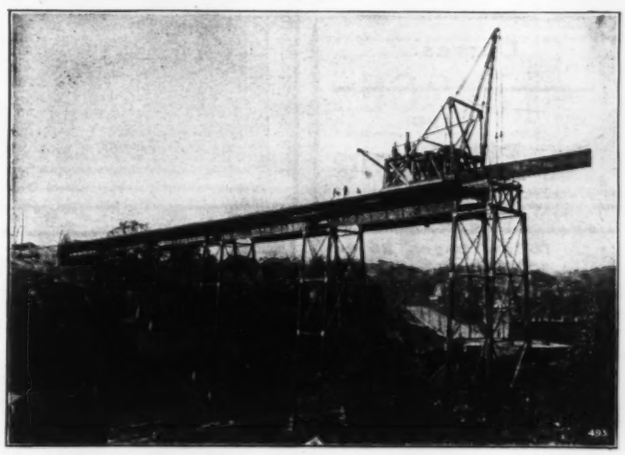

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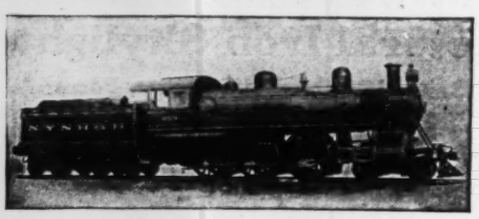

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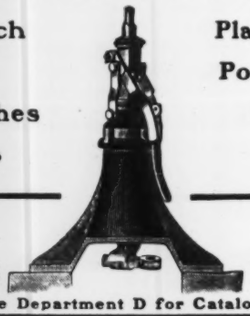

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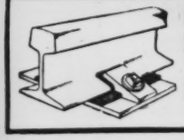

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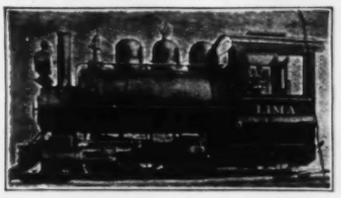

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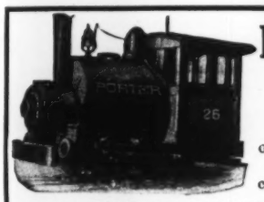

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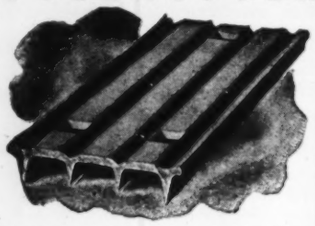

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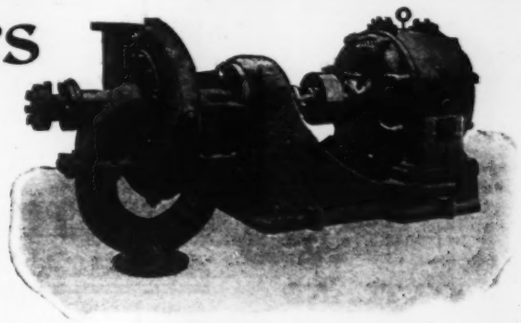

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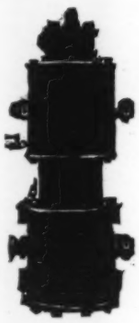

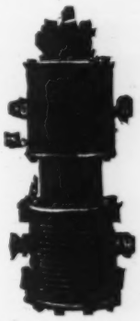

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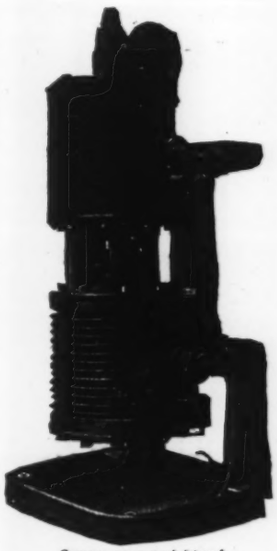

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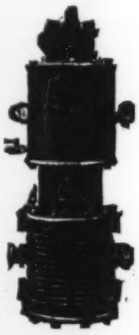

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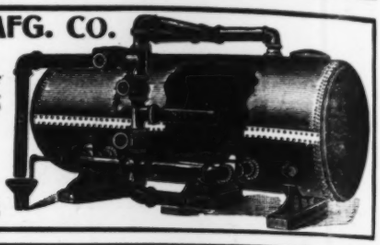

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